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ABSTRACT

Keynote papers from Delaware's first annual statewide conference on the education of children of limited English proficiency (LEP) are presented in this document. They include: "Delaware's Initiatives in the Education of Children of Limited English Proficiency" (William B. Keene); "Research and Issues in the Education of LEP Students" (Ramon Santiago); "Using Evaluation To Improve Instructional Services for Limited English Proficient Students" (J. Michael O'Malley); and "Integrating Language and Content: Improving Academic Achievement for LEP Children" (George Spanos and JoAnn Crandall). Appended materials include figures on Delaware's annual dropout rates and graduation rates for the class of 1986, a paper describing The Educational Advancement Model (TEAM) used in the state's dropout prevention program, a National Clearinghouse on Bilingual Education brochure, Delaware's policy statement on the education of LEP children, and a list of conference participants. (MSE)

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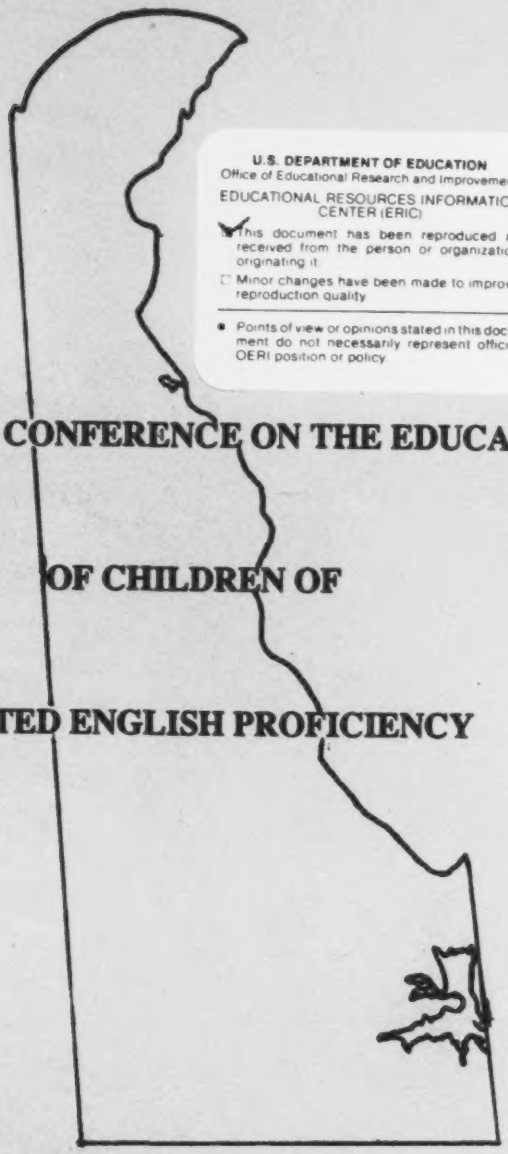

STATEWIDE CONFERENCE ON THE EDUCATION

OF CHILDREN OF

LIMITED ENGLISH PROFICIENCY

DOVER AIR FORCE BASE OFFICERS' CLUB
DOVER, DELAWARE

MAY 19, 1987

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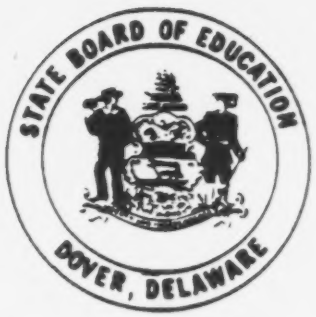
STATEWIDE CONFERENCE ON THE EDUCATION OF CHILDREN OF LIMITED ENGLISH PROFICIENCY



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Edited by:

Rebecca H. Scarborough, State Supervisor of Foreign Languages

Dover Air Force Base Officers' Club
Dover, Delaware
May 19, 1987

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PREFACE

The first annual Statewide Conference on the Education of Children of Limited English Proficiency was held on May 19, 1987, at the Dover Air Force Base Officers' Club in Dover, Delaware. Called to address the needs of limited English proficient students in the State, the conference featured as keynote speakers leading experts in the field of bilingual education. Presentations from Department of Public Instruction personnel highlighted the Delaware annual dropout and graduation rates for the class of 1986, as well as Department initiatives to increase the graduation rate of all students. The conference also served as a forum for a discussion of the recently adopted "Policy on the Education of Children of Limited English Proficiency." It closed with a lively question and answer period addressed to the distinguished panel of speakers and presenters.

Delaware, in a concerted effort to improve student success rates and in an earnest attempt to address more fully the special needs of the minority language child, is seriously examining ways to increase educational opportunities fof children of limited English proficiency.

This conference was a beginning. These proceedings are being published in order to disseminate the valuable insights of the speakers to a larger audience of educators. It is the hope of the conference planning committee that, as the level of awareness rises, so will organized efforts on the part of school administrators, resulting in improved program planning and implementation. It is with a great deal of gratitude to all involved -- the planning committee, presentors, the sponsors, and the participants -- that I dedicate these proceedings. May future conferences be as successful as this one in enlightening educators about the problems and promises these children bring.

Rebecca H. Scarborough
State Foreign Language Supervisor

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PROGRAM

2:00 - 2:30 p.m.	Registration Confirmation and Displays (NCBE Electronic Services; Video Preview -- "Hispanic Dropouts: America's Time Bomb")
2:30 - 3:15 p.m.	WELCOME: Dr. William B. Keene, State Superintendent of Public Instruction Dr. Robert F. Boozer, State Supervisor, Research and Management Information: "Delaware's Hispanic Dropout Rate" Clifton A. Hutton, State Supervisor, Guidance/Pupil Personnel Services: "T.E.A.M."
3:15 - 3:50 p.m.	Presider: Horacio D. Lewis, State Supervisor, Human Relations Speaker: Dr. Ramon L. Santiago, Director, Georgetown University Bilingual Education Service Center, "Research and Issues in the Education of LEP Students"
3:50 - 4:25 p.m.	Presider: Sister Joan Hoolahan, Coordinator, Migrant Education Center, Capital School District Speaker: Dr. J. Michael O'Malley, Director, Georgetown University Evaluation Assistance Center, "Using Evaluation to Improve Services to Limited English Proficient Students"
4:25 - 4:45 p.m.	Dr. Enrique M. Cubillos, Assistant Director, The National Clearinghouse for Bilingual Education: "NCBE Services"
4:45 - 5:00 p.m.	BREAK
5:00 - 5:45 p.m	Presider: Norma Antongiorgi, Supervisor Bilingual Education, Red Clay Consolidated School District Speaker: Dr. JoAnn (Jodi) Crandall, Director, Communication Services Division, Center for Applied Linguistics, "The Integration of Language and Content" Speaker: Dr. George A. Spanos, Research Associate, Center for Applied Linguistics, "Academic Language and Achievement for LEP Children"
5:45 - 6:15 p.m.	INFORMAL INTERACTION -- DISPLAYS
6:16 - 7:45 p.m.	INTERNATIONAL DINNER
7:45 - 8:15 p.m.	SPEAKERS' PANEL DISCUSSION - Questions and Answers
8:15 - 8:30 p.m.	EVALUATION

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Superintendent of Public Instruction

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DELAWARE'S INITIATIVES IN THE EDUCATION OF CHILDREN OF LIMITED ENGLISH PROFICIENCY

William B. Keene
State Superintendent of Public Instruction

DELAWARE'S INITIATIVES IN THE EDUCATION OF CHILDREN OF LIMITED ENGLISH PROFICIENCY

William B. Keene
State Superintendent of Public Instruction

Welcome to Delaware's First Statewide Conference on The Education of Children of Limited English Proficiency. This conference is one of several Department initiatives made this year to improve educational programs for language minority students. The first was the appointment of a State Supervisor of Foreign Languages. The second was the development and adoption in February of a "Policy on the Education of Children of Limited English Proficiency." This policy emphasizes the Board's commitment to equal educational opportunity for every eligible student of limited English proficiency. It also stresses the Board's belief that educational programs for LEP students should enable them to develop academically while achieving competence in the English language. The ultimate goal is successful integration into regular classrooms and meeting grade promotion and graduation standards. This policy allows for local flexibility in deciding what kind of program a district wants to implement.

A third initiative was a major teacher inservice activity relating the elements of effective instruction to second language programs. This 15-hour workshop was presented by consultants from the University of Delaware, the Center for Applied Linguistics, and Georgetown University and involved 36 educators.

Future plans call for an extensive data collection project on LEP students and programs, the formation of a State LEP Advisory Council to consist of teachers, administrators, parents, and community-based leaders, and extensive professional development activities.

On the national level, it should be noted that the Resource Center on Educational Equity of the Council of Chief School Officers has been awarded a two-year grant by the Carnegie Corporation of New York to undertake a major project concerning the educational needs of LEP students. This project will examine and encourage successful interagency approaches in an effort to meet the challenge of improving the quality of educational services to the 3.6 million LEP pupils enrolled in our nation's public schools. It has been estimated that this number will increase by as much as 35 percent throughout the rest of this century.

I am extremely pleased with the impressive list of speakers on today's program. Thank you all for your participation in this conference and may this event be the first of many to come.

RESEARCH AND ISSUES IN THE EDUCATION OF LEP STUDENTS

Rámon L. Santiago, Director
Bilingual Education Service Center
Georgetown University
Arlington, Virginia

Research and Issues in the Education of LEP Students

Rámon L. Santiago, Director
Bilingual Education Service Center
Georgetown University
Arlington, Virginia

There are few educational populations in the United States that deserve more attention than children of limited English proficiency (LEP's for short). Because of the nature of American society, and because of the position of the United States in the international scene, school districts all over the country will continue to face growing populations of LEP students who have been born in this country or in territories of the U.S. or who have come to the U.S. for a variety of reasons. Differing estimates put the number of these LEP students at between 2 and 3.5 million, but whatever the numbers, there is no question that these students deserve our best efforts on both moral and legal grounds.

I am sure that during the course of this conference much will be said about the education of LEP students. I am equally certain that officials from the Delaware Department of Public Instruction have been grappling with this issue and looking for innovative and effective ways of meeting the needs of these students. What I would like to do today is to identify and put into proper perspective a few of the most important issues facing those of us who are involved in the education of these LEP populations. At the same time, I would like to address some of the myths and misconceptions that have plagued our efforts to deal equitably and effectively with LEP students and to suggest that the solution to the educational problems of LEPs must begin with a thorough understanding of who our LEP students are, what they bring to our school system, and what are some of the most effective ways of addressing their needs and concerns. Whenever appropriate, I will make reference to what the research has to contribute to this endeavor.

I. Characteristics of LEP Populations

I feel very strongly that any discussion about meeting the needs of LEP students must begin with a clear understanding and appreciation of who our clients are. A curriculum guide prepared by the Ohio Department of Education Lau Center describes a LEP student as "one whose native language is not English, and whose difficulty in speaking, reading, or writing or understanding English is an obstacle to successful learning in a classroom where English is the only language of instruction." This statement adequately describes the linguistic shortcomings of LEP students and previews the types of language problems that these students are likely to face, but elsewhere the guide also reminds us of the assets that LEP students bring with them. The guide tells us that "although the student may be limited in his or her knowledge of English, he or she is not deprived culturally, but rather has a cultural and linguistic background which is simply different from the culture of the United States."

Such a realization about the positive characteristics of our LEP populations is essential because it will hopefully keep us from viewing LEP students as merely "problems." Granted, LEP populations will have their share of educational and other problems. Hmong children, for example, may not be literate in their native language; children from war-ravaged areas such as Nicaragua and El Salvador may lack the support of a stable and intact home, and such children may have had little or no formal education.

But in one important sense, LEP students should be no more problematic than mainstream students. When we look at preliterate mainstream children, we normally don't think of them as being handicapped because they cannot read their own language. We accept the fact that these children can't read because they haven't been exposed to reading. We see the issue of preliteracy as one of development and recognize that these preliterate children have many other assets: some background knowledge, a very useful spoken language, and a degree of socialization provided by the home.

Similarly, many of the LEP children who have not been victims of traumatizing experiences such as wars are perfectly normal children who just happen not to have a sufficient command of English. In attempting to address their needs, it is important for us not to assume that every LEP child requires crisis intervention. Not being homogeneous, LEP children come to our classrooms with a variety of assets. If we were to take stock of their talents, we would find that:

a. not all of them have zero proficiency in English. Some have a budding competence that will require little assistance to make it native-like.

b. many LEPs possess respectable levels of native language proficiency, which will be greatly determined by the amount and quality of education received in their native country (if they are from outside the U.S.).

c. some LEPs have received excellent schooling and exhibit solid academic skills gained through their native language, and

d. not every LEP comes from a poor or broken home.

II. Our Attitudes toward LEPs

It must be stressed once again that LEP populations will contain examples of traumatized children who have suffered more than some adults ever will and who are candidates for very specialized services for a number of reasons. Such students ought to be identified and attended to expeditiously, particularly the ones who might require special education. But once we have taken care of the educational and psychological hardship cases, we must avoid

at all costs perceiving the bulk of LEPs as social, psychological, and educational problems. As these students strive to become fluent in English and to acculturate to the educational and social systems of the United States, they will need the full support of those of us in the educational field. In addition to giving them the benefits of our technical expertise, we should also offer them our understanding, our empathy, our respect and our appreciation. Specifically, this means that:

1. We should refrain from lumping all LEPs into the category of "foreigners." We should remember that LEP students are not all immigrants. Some LEPs are American Indian and Alaskan Native students who come from environments where a LOTE (language other than English) has had a significant impact on their level of English language proficiency. Some LEPs are Puerto Ricans, who have been American citizens since passage of the Jones Act of 1917; others are Chicanos who may not know any other country except the U.S.; others may be children of naturalized parents and may feel as American as apple pie. Our empathetic understanding should begin with not assuming that every LEP is a "green carder" or an illegal alien.

2. Secondly, in line with the findings of the literature on effective schools, we should have high expectations of success for our LEP students. We should view these students "as exhibiting the same diversity of individual interests and talents that characterize the rest of the students" (Ohio Department of Education, 1986). Such a positive attitude, according to the research, has been instrumental in dispelling negative sterotypes about abilities and characteristics of language minority students and has reminded the outside community of the intellectual assets of these pupils.

3. Thirdly, we should give proper consideration to the language and culture that the LEP student brings to the school. To some of you, such advice may seem unnecessary, but I have found that even in 1987 we must still remind educators and community members that the native language of LEP students is a prized possession. Many people still don't accept that the native language of LEPs makes them potential bilinguals; that their native language, which has served them well up to now, can continue to assist them in adjusting to their new environment and in preventing academic retardation in school. Thus, the LEP students' native language needs to be viewed as an educational asset and not as an illegal weapon whose use must be forbidden at school.

This emphasis on the value of the native language is needed because only a few weeks ago the school district of Tornillo, Texas sent consent forms to Hispanic parents asking them to promise to punish their children at home if they were caught speaking Spanish in school and were reported by the school authorities. Fortunately, pressure from community groups and government officials has already forced the school district to put a stop to this practice. But we should be aware that organizations such as U.S. English and English First have been spearheading a movement to curtail the use of languages other than English for education, business, and social transactions and in the process they have created a climate that is harmful to the coexistence of groups with diverse languages and cultures. Robert Lado of Georgetown University refers to the outcome of such attitudes as:

> a widespread contagious disease that I will call "monolinguosis" on the analogy of mononucleosis and halitosis because like mononucleosis it is debilitating, and like halitosis, it is a symptom of some internal condition that causes bad breath (p. 3).

In our dealings with LEP students, we as educators should scrupulously disavow any of the culturally and linguistically intolerant attitudes espoused by groups like U.S. English and English First. We should make it clear to our LEP students that we value their language and culture, that we see these as assets and not handicaps, and that we are willing to use them to the extent possible to promote the students' academic progress.

III. Programmatic Options

Naturally, our enlightened attitude toward LEP students must not blind us to the fact that every LEP student is potentially "at risk." Each and every LEP student runs the risk of doing poorly academically if he/she is not given access to special program designed to meet his/her special needs. Our responsibility as educational leaders begins with the recognition that, unlike the pre-literate mainstream children, LEP students cannot be simply immersed into a regular English program under the mistaken assumption that substantial exposure to English will solve their educational problems. We must begin by recognizing that LEP children, like any other group of children at risk, deserve and require special programs that have been designed to address their special needs; special programs that do not espouse deceptively easy answers to complex problems (such as promising English proficiency in a few months); special programs that will address the totality of the <u>educational</u> requirements of these children, not just their English language needs.

A number of programmatic options for addressing the needs of LEP students are available to school districts, some utilizing monolingual education, others employing bilingual instruction. Finnish scholar Tove Skutnabb-Kangas has classified seven of the available options according to mode of instruction, linguistic aim, and societal goal. The accompanying handout illustrates the possibilities, though it must be mentioned that some of the options described (e.g., Type 3, Segregationist) would not be acceptable in the United States.

With so many choices available, it is not surprising that some district program planners feel overwhelmed by the possibilities and are concerned about what the proper programmatic choices should be. It is obviously impossible to discuss all the considerations that should be observed by the decision makers in selecting educational treatments for LEP students, but I would like to highlight a few of the concerns that in my experience frequently trouble school officials.

1. **Bilingual vs. monolingual:** The first concern is the advantage, if any, that options employing bilingual instruction have over those utilizing monolingual education. There is sufficient evidence that supports the affective, cognitive, and academic benefits of bilingual education programs, and for most bilingual education advocates the only question is whether the proper conditions are present: that is, number of students of the same language background; the availability of qualified teachers and appropriate materials; and the support of the community for the program.

For districts that have sufficient numbers of LEP students to make a bilingual program viable, the choice of bilingual instruction is highly recommended, since bilingual instruction is the only approach that combines acquisition of the target language (English), academic progress through the native language, and the bonus of bilingualism.

2. **Submersion vs. Immersion:** Secondly, submersion is not a viable option, being both educationally unsound and probably illegal. Program planners sometimes confuse submersion with immersion because both options appear to employ the majority language (in this case English) immediately, intensively, and exclusively. In point of fact, classical immersion is an option that employs a bilingual methodology (though done in stages), that has bilingualism as a linguistic aim, and endorses pluralism as a societal goal. Research favors immersion as one of the most effective methods of promoting second language acquisition, but the implementation of viable immersion programs is quite complex. Moreover, most of the documented successes have occurred with majority populations, and even the researchers who pioneered immersion programs in Canada (Tucker, Lambert and Genesee) have stated that similar results may not be possible with minority populations learning through the majority language.

3. **Integration vs. Isolation:** Thirdly, programmatic options should be fully integrated into the mainstream curriculum so that LEP students have access to the same content provided to mainstream students. This integration is one of the features that characterizes effective schools. One school in the Bronx achieves curricular integration in its bilingual program by utilizing reading series of comparable quality and content. In this way, no matter what language the students are taught in, they will be exposed to the same skills and material.

4. **English Proficiency vs. Education:** Fourthly, the ultimate goal of any special program for LEPs should not be just English language proficiency, but academic progress and academic proficiency, just like it is the mainstream

program. This means that LEP students are the responsibility of all educational and support personnel, not just the ESL and bilingual staff. This also means that LEP students need to be taught not only English, but also math, science, and social studies; not just linguistic skills, but also cognitive skills and leaning strategies. Our next speaker can share with you on another occasion the CALLA model (Cognitive Academic Language Learning Approach) that incorporates English language development and cognitive strategies and teaches the LEP students to be more effective learners.

If we recognize that programs for LEPs should teach more than English, then the case for bilingual instruction is even stronger, because the native language can be utilized to impart the content and the skills that will strengthen the academic progress of the LEP students.

5. **Early vs. Late Exit:** Lastly, special programs should not have timelines that are based on unrealistic expectations of how long it takes a LEP child to acquire enough English proficiency to function in the mainstream classroom. At the state level, some programs are saddled with legislative or administrative mandates establishing maximum periods of participation in special programs. Research studies such as the ones conducted by Lily Wong Fillmore indicate that not all learners learn a second language at the same rate, and that on the average an undistinguished language learner requires 5 to 7 years to develop competence in a second language.

Additionally, other researchers (e.g., Cummins) tell us that there are two basic types of language proficiency--BICS and CALP. BICS--basic interpersonal communicative skills--the kind of language proficiency that will allow LEP students to get along in social (or cognitively undemanding) contexts, which is accompanied by much redundancy, contextual clues, and nonverbal behavior--develops first with little effort on the part of the learner. CALP (cognitive academic language proficiency), on the other hand--which is needed to tackle tasks that are context-reduced and cognitively demanding--must be formally taught and takes a considerable amount of time to develop. When school officials insist that LEP students don't need to spend all that time in a bilingual program because they already possess adequate English language skills, they are usually basing their assessment on BICS. What they may fail to realize is that when the LEP children are mainstreamed into the regular classroom, they will be called upon to utilize their CALP in order to succeed.

In addition to BICS and CALP, successful LEP students are also expected to acquire interactive or functional competence--the kinds of skills that will allow them to interact with their peers and their teachers as they attempt to master language and academic content. LEP students have to learn to ask questions, to manipulate cognitive materials, to deal with the academic demands of the classroom. Learning tasks such as these cannot be accomplished within artificially legislated timelines. As one educator wisely put it: "the time limit should be based on a student's proficiency and not on the clock."

IV. Summary

In this presentation, I have attempted to suggest that LEP students need our help if they are to overcome their "at-risk" status. In trying to meet their needs, we must make an effort to understand who these LEP students are and what they bring to the American classrooms. We must be empathetic and positive about their chances for success and try to design the type of program that will most effectively contribute to their linguistic, cognitive, and academic advancement.

I have addressed a number of concerns facing school officials charged with the education of LEP students and have suggested that program planners be guided by good pedagogy and the results of research in program implementation.

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Handout 1

TYPE 1: Monolingual education through the medium of the majority language the goal of which is monolingualism for majority children. (This is mainstream education in the U.S.)

TYPE 2: Monolingual education through the medium of the majority language the goal of which is monolingualism for minority children. This is also known as submersion, with the societal goal of assimilation.

TYPE 3: Monolingual education through the medium of a minority language the goal of which is monolingualism in the minority language for a minority. These programs are associated with societal goals of segregation or apartheid.

TYPE 4: Monolingual education the goal of which is bilingualism for minority children, where the native language of the children is the medium of instruction for the first several years, possibly throughout the obligatory schooling, with the majority language as a second language. These are maintenance or language-shelter programs.

TYPE 5: Monolingual education through the medium of the minority language the goal of which is bilingualism for majority children. This is the Canadian immersion program.

TYPE 6: Bilingual education the goal of which is monolingualism for minority children. This is best represented by U.S. Transitional Bilingual Education Programs.

TYPE 7: Bilingual Education the goal of which is bilingualism for both minority and majority children. We know these programs as two-way or enrichment bilingual programs.

From Bilingualism or Not: The Education of Minorities (1981) by Tove Skutnabb-Kangas. Avon, England: Multilingual Matters.

USING EVALUATION TO IMPROVE INSTRUCTIONAL SERVICES FOR LIMITED ENGLISH PROFICIENT STUDENTS

J. Michael O'Malley, Director
Evaluation Assistance Center - East
Georgetown University
Arlington, Virginia

Using Evaluation to Improve Instructional Services to Limited English Proficient Students

J. Michael O'Malley, Director
Evaluation Assistance Center - East
Georgetown University

Instructional programs for limited English proficient students are in need of improvement. There is dramatic national evidence that limited English proficient students encounter difficulties in learning English and consequently fall behind their native English speaking peers as evidenced by lower educational achievement, fewer years of schooling completed, higher dropout rates, and lower status occupational attainment (Duran, 1983; Hispanic Policy Development Project [HPDP], 1984; National Center for Education Statistics [NCES], 1982; National Council on Employment Policy [NCEP], 1982; Newman, 1978; Office of the Assistant Secretary of Defense [OASD], 1982; Roth, 1982; Veltman, 1980). The only sensible conclusion to draw from this evidence is that whatever we have done in the past has not worked for most limited English proficient students.

The question I will address concerns how we go about the process of improving instructional programs for limited English proficient (or LEP) students. I will suggest that educational evaluation can be used to assist in this process in at least four ways. These ways are somewhat different than the way in which educational evaluation is usually viewed in local school districts. In school districts, evaluation is often seen either as the school testing program, or as impartial pre- and post-testing that is far removed from helping teachers plan for effective instruction. While these impressions may be accurate in many districts, evaluators can and should do more than just administer the tests and walk away with the results. These school district impressions unfortunately are often exacerbated by federal requirements to report evaluation data, since the evaluation requirements may be fulfilled through reporting procedures that leave district instructional personnel without feedback concerning the performance of their students.

The four ways that I will describe for improving instructional programs based on evaluation have evolved out of actual experiences the Georgetown University Evaluation Assistance Center (EAC) East has had in working with school districts on the eastern half of the United States. This is the territory we cover under our contract with the U.S. Department of Education's Office of Bilingual Education and Minority Languages Affairs. The EAC East provides technical assistance to state and local education agencies on the evaluation of instructional programs for LEP students and consequently has had a number of experiences that we can draw upon. Incidentally, while we focus our services on those programs funded by Title VII of the Elementary and Secondary Education Act, otherwise known as the Bilingual Education Act, other programs for LEP students often receive our technical assistance as well. In providing this technical assistance, we try to expand the view of educational evaluation beyond the way it has been seen in the past.

Now for an overview of the four ways in which evaluation can be used to assist in the improvement of local instructional programs. The first of these is through curriculum alignment, or the adjustment of curriculum to match the objectives identified in state competency examinations or standardized achievement tests. The second is through monitoring student progress, one of the key elements identified in the Effective Schools literature, in which student progress toward instructional objectives is analyzed diagnostically based on both classroom performance and assessment procedures. The third is through assessment for entry and exit, or initial identification as LEP for entry into an ESL or bilingual program, and reclassification as eligible to exit from an ESL or bilingual program into the mainstream of education. The fourth evaluation process for improving instruction is through program documentation, or developing a clear description of the principal instructional components of the ESL or bilingual program that are expected to influence gains in English language skills. I will now provide a more detailed description of each of these processes.

Curriculum Alignment

The first process, curriculum alignment, has been used by the EAC East in a number of workshops and is now being used by a number of school districts. About a year and a half ago, the EAC East was contacted by the New Jersey State Department of Education and asked to conduct a series of workshops for local school districts. The purpose of the workshops was to inform district staff about a new state competency examination, the High School Proficiency Test (HSPT), which students were required to pass in order to receive a high school diploma. In the past, New Jersey had required students to obtain a passing score on a minimum competency examination of basic skills as a condition for graduation. On the new exam, students had to obtain a passing score but the skills assessed could no longer be considered minimal. The state wished to prepare their students for the demands of a technological society and developed a new set of reading, writing, and mathematics tests consistent with this view. State-level staff in programs for LEP students were concerned that large numbers of students would not be able to pass this examination and mounted an effort to ensure that districts were informed about the examination, and could implement effective procedures to improve the chances of LEP students to pass the exam.

The State Education Agency (or SEA) efforts in New Jersey took the form of providing technical assistance to school districts on curriculum alignment. In this process, local districts align their curricula to the substance objectives of the HSPT examination. Conveniently, the SEA design for the HSPT includes a fairly sophisticated system for providing feedback to school districts. Districts receive information down to the classroom level on the percentage of students who pass individual test items grouped within subskill objectives. To illustrate, districts receive information in the reading area for objectives on both "literal comprehension" and "inferential comprehension." Furthermore, within "literal comprehension," they receive item level information on "identify synonyms," "differentiate between relevant and irrelevant information," "identify the main idea of a passage," and

"identify cause effect relationships," among others, for a total of 11 sub-objectives within "literal comprehension" alone. Because the test items are changed each year, the teachers cannot use this detailed information to teach the test. The information on classroom level performance is provided separately for all LEP as contrasted with other students. In addition to the classroom level information, comparison data for percentage of students passing an item are provided at the building level, the district level, and the total state. The SEA bilingual staff capitalized on this existing system in designing the technical assistance which they asked us to provide.

What the EAC East did for the SEA was to describe the HSPT system to district personnel, and show them how to interpret the data provided by the system to assist in re-designing classroom instruction. We provided a number of regional workshops around the state for district personnel consisting of an initial description of the HSPT system followed by a variety of hands-on activities. After the workshop introduction and overview, teachers were assigned to small groups by grade level within their district. The teachers rated each of the subskill areas tested in the HSPT for the grade level at which the skill is taught in their district and the degree of emphasis given to the skill. Then the teachers were asked to inspect sample information on subskill performance in their school or district which described the percentage of students receiving the correct response. They identified subskill areas in which performance fell below a minimal level which they had established. By matching the sample HSPT performance level with the degree of emphasis given in instruction for each subskill area, the teachers were able to determine for which subskill areas the instructional emphasis was appropriate, and in which subskill areas greater emphasis or modified instruction was needed. Later, these district personnel conveyed this information to teachers in their own districts so the teachers could use live HSPT data on their own LEP students to align their curricula. District personnel can also use this kind of information to select areas in which inservice training is needed for teachers.

This use of evaluation information to improve instruction for LEP students deserves some comment. One advantage of this type of system is that it is not limited to SEAs which have developed a minimum competency examination with a sophisticated feedback procedure. The same kind of feedback is available at the classroom level on most standardized tests, including the Comprehensive Test of Basic Skills, which is used in Delaware. Another advantage is in empowering teachers to capitalize on evaluation information that has been collected on their students rather than simply acting as a vehicle for state or district test administration. A possible limitation is that teachers will "teach to the test." However, teachers who increase the overlap between what is tested and what is taught are simply following good instructional design procedures rather than engaging in an underhanded way to increase the performance of their students. In all, we considered this to be a highly effective state-initiated effort to improve the effectiveness of instruction delivered to students.

Monitoring Student Progress

A second use of evaluation information to improve the quality of instruction for LEP students emerged out of the "Effective Schools" research. This research evolved as a reaction to claims made by some researchers in the late 1960s and early 1970s that the socioeconomic background of students is the major determinant of school success, and that schools can do little to improve the achievement especially of minority students. Other researchers reacted to this line of reasoning by looking for "effective schools," that is, schools that were able to beat the odds against minority students by showing gains in educational performance in basic skills. The Effective Schools research has sought to identify the salient characteristics of effective schools which differentiate them from less effective schools, or schools which are unable to show gains in performance by minority students. The "short list" of characteristics that is usually mentioned in most articles on Effective Schools consists of the following items.

1. Strong Instructional Leadership, often on the part of the principal, where the leadership takes a direct hand in the instructional program;

2. An Institutional Focus on Basic Skills, or a focus on basic skills acquisition for all pupils, which is usually manifested in some form of direct instruction;

3. School Climate, or an orderly, business-like, but not oppressive climate in the school where both students and teachers feel that the business of learning can proceed without major disruptions;

4. Expectations, the anticipation by both teachers and principals (as well as parents) that all pupils can achieve a minimum mastery of basic skills; and

5. Monitoring, or frequently monitoring pupil progress in the classroom, making better use of existing test information (not just more testing), and using test information diagnostically for instruction.

Despite the intuitive appeal of these characteristics, there are some limitations to the applicability of these findings that should be mentioned. First, the findings are based on correlation studies and consequently can not be taken as conclusive evidence that the presence or introduction of these factors will inevitably lead to improved performance among minority students. Second, the evidence is based on what now exists in schools not on what can exist, so that recent findings on the importance of cooperative learning and learning strategies for reading comprehension, mathematical problem solving, and second language acquisition are not represented. And third, the effective schools studies have never focused on the achievement of language minority students but instead have concentrated on the achievement of racial minority students. While these limitations raise questions about the applicability of the findings for LEP students, I nevertheless want to select one of the Effective Schools findings for more attention. I believe it has importance in the context of a talk on uses of evaluation to improve instructional practice.

The characteristic I wish to focus on is the fifth characteristic of effective schools, monitoring student performance. This represents the second evaluation process we have found useful for the improvement of instructional practice. Monitoring student performance implies making better use of test information, using test information diagnostically for instruction, and monitoring student performance in classrooms. To help schools make better use of test information, and use test information diagnostically, the EAC East has developed a Bilingual Test Information System that contains reviews of major tests used in bilingual and ESL programs. The tests reviewed are in four categories: oral language tests, achievement tests, diagnostic tests, and affective tests. Equally important as the test reviews themselves, an introductory section discusses how to use and interpret test scores that are obtained with these instruments. The Test Information System will be issued in loose-leaf form so that we can add new test reviews in the future. Toward the end of this summer, we will send the document to the National Clearinghouse for Bilingual Education (NCBE), to the EAC West, and to all SEAs and Multifunctional Resource Centers in our region. Local school districts can obtain the document from the NCBE, with a nominal cost for materials, or from their SEA.

In addition to the test information, we have provided school districts with technical assistance on procedures for monitoring student performance in classrooms. The EAC East was asked to develop and present a workshop on this topic in New York City by the Hunter College/Teachers College Multifunctional Resource Center. This workshop focused on developing instructional objectives, on maintaining individual student record systems, and on developing classroom profiles which monitor classroom progress in mastering instructional objectives. We have attempted to develop monitoring systems which are usable by individual teachers and do not constitute an excessive burden beyond records the teacher might wish to keep on students anyway. The workshop was given a second time in New York City just recently.

We are presently reviewing monitoring practices of a number of effective schools with large minority language populations. We have found one school with a microcomputer system where teachers update records on their students intermittently and receive a revised computer printout with each update showing progress toward their instructional objectives. We hope to conduct a site visit with this and other schools designated in state reviews of effective schools in order to obtain additional information.

Entry/Exit Procedures

The third evaluation process we have identified for improving instruction for LEP students is to clarify and improve entry and exit procedures. Entry procedures identify students who need to enter into either a bilingual or an ESL program, and exit procedures identify when a student is prepared to exit from such a program into mainstream instruction. The EAC East has prepared a workshop on this topic that was initially requested by the Chicago Public Schools and that was given later in Louisville. We have given a similar workshop in Boston and other cities in the northeastern states.

This issue is important instructionally because of possible overidentification, or selection of minority language students to participate in special instructional services like ESL when in fact they might the better off in the mainstream. This issue is also important because of possible underidentification, or placement of minority language students into mainstream classrooms prematurely. The result of either mistake in classification is that students do not receive instruction that is appropriate for their educational needs. State practices with respect to entry/exit criteria differ widely, ranging from no formal policy at all, to a policy of identifying eligible tests, and to a policy of establishing minimum criterion scores that are acceptable for entry and exit. To my knowledge, no state has a policy that requires both a specific test and a specific criterion score for entry and exit.

The Entry/Exit workshop developed by the EAC East makes three major points that can be used to improve services to LEP students. The first is that multiple assessment procedures are useful in the assessment of English language skills with minority language students. Such procedures will include a formal test of English language proficiency but might also include informal assessment procedures such as teacher observation and ratings, oral and written samples, cloze tests (which assess reading or listening as an integrative skill), dictation tests (which assess student comprehension), and story retelling tests (which assess both comprehension and production). The concepts we stress in the workshop are that all of the informal assessment procedures can be performed by a teacher in a classroom, that this information may be necessary to provide a complete picture of the English language skills of the student, and that informal assessment procedures are available that can be used by teachers with relative ease (Hamayan, Kwait, & Perlman, 1985). By collecting and using this kind of information, teachers gain a better understanding of the strengths and weaknesses of students in their classrooms.

A second point we make in the Entry/Exit workshop is that assessment for exit from ESL or bilingual instruction should take into consideration the cognitive academic language proficiency (or CALP) of the students. Let me explain CALP by pointing out that, according to Jim Cummins (1983), language proficiency can vary along two dimensions. The first dimension is the degree of contextualization for the language. Language used in interpersonal communication is highly contextualized by the speaker's gestures, facial movements, and sometimes by the presence of real objects that are the subject of discussion. Further, contextualized communication is often one-to-one and interactional so that the listener can ask questions or respond immediately to what has been said. In contrast, language used in classrooms is often decontextualized because it is usually not interactional and -- except for science experiments -- is rarely performed in the presence of the objects which are the subject of discussion. Examples of decontextualized language are a discussion of math word problems, which often involve measurements or calculations performed in the abstract, and social studies and history, where neither current nor historical concepts may contain immediate referents.

The second dimension along with language varies is the cognitive demand involved in the task. Using language in the interpersonal interactions is not usually demanding, nor are the language tasks required in initial literacy. In contrast, using language in mainstream classrooms is not only decontextualized but it is cognitively demanding. Students in the mainstream are required to understand academic presentations without visuals or demonstrations, practice formal oral presentations on substantive topics, and answer questions in class that call upon analytic reasoning and evaluative processing. The students are reading for information on content subjects, reading for interpretation in literature, reading and solving word problems in mathematics, and writing compositions or research reports that call upon higher level skills.

In ESL classrooms, students are familiarized with the English language initially by using cognitively non-demanding, highly contextualized language, such as developing survival skills, following demonstrated directions, practicing oral language exercises and communication, and answering factual or descriptive questions about tangible experiences or materials. Students in ESL programs also usually learn basic literacy skills including decoding and literal comprehension.

The typical exit system in most school districts moves students out of ESL or bilingual instruction when they demonstrate adequate proficiency on English language tests that use non-cognitively demanding tasks. For example, many districts rely upon a test of language mechanics and reading comprehsnion for exiting students into the mainstream. This exit procedure assumes that students introduced to contextualized, non-demanding English language tasks will be able to survive when they are placed in mainstream classes where they are required to use decontextualized, cognitively demanding English language tasks. These students move from <u>learning to use the language</u>, to <u>using the language to learn</u> with no point to stop off in between.

This digression into an analysis of language proficiency required for performance in mainstream instruction suggests that exit assessment should take into consideration the cognitive academic language proficiency of the student. There are a number of ways to do this, all of which should result in better instruction for LEP students. One way is to assess performance on tests in content areas such as science, mathematics, and social studies as part of the criteria for exiting the student to the mainstream. Thus, students exiting to the mainstream will be expected to perform to a satisfactory level on the full range of cognitive academic language skills--not just in reading.

A second way to take academic language skills into consideration for exiting to the mainstream is to develop instructional programs that teach English as a second language through the content areas (e.g., Chamot & O'Malley, 1987). These are referred to as content-based ESL. These programs differ from mainstream programs because the teacher develops English language objectives as well as content objectives and simplifies the language demands of the classroom while contextualizing the language input so that the content

will be understood. The teacher also ensures that all four language skills -- reading, writing, speaking, and listening - are used and exercised during instruction. In this approach, the teacher simplifies the language demands of instruction while maintaining content demands appropriate to the student's grade and prior educational background. A curriculum of this kind can be the highest level of ESL instruction presented in the last year before the students exit into the mainstream. With this type of instructional approach in place, assessment of cognitive academic language skills for exit will correspond to the actual skills taught during instruction and the assessment will have curricular validity.

This raises the third major point we make in the Entry/Exit workshop, that the most important criterion in test selection for exit assessment should be curricular validity. That is, the skills assessed by tests used in exit assessment should correspond to, or be valid for, the objectives of the English as a second language curriculum. Students who are assessed at exit based on tests which do not reflect the curriculum used in their ESL programs are being set up for failure. This third point is basically why we never recommend specific tests for exit assessment: the test selection should depend on what is taught in ESL, and what is taught varies from district to district. Similarly, we do not recommend specific tests for entry assessment because the language skills assessed at entry should reflect what the district believes are important essential skills in English, and this also varies depending on the district.

Program Documentation

The fourth evaluation process we have identified that is important for improving instructional practice is program documentation. This consists of developing a clear description of the instructional components that are expected to produce gains in students' English language outcomes. This is an essential but often neglected part of the evaluation process. By documenting instructional or other procedures that are expected to influence educational outcomes, programs accomplish a number of important ends. One is that they clarify whether or not the activities described at the onset of the program, and perhaps included in their project proposal, are in fact the activities which were implemented. It has not been unusual for projects to shift instructional tactics when interim feedback from teachers suggests that alternative instructional approaches are equally viable and even more successful. Projects also shift instructional approaches when implementation problems or difficulties in obtaining required materials prevent what was intended from actually occurring. A second end that is accomplished by program documentation is that written descriptions of the program design can be used for inservice training. The skills teachers possess to implement the curriculum designed can be reviewed periodically and strengthened through special workshops. A third important end that is accomplished by program documentation is in communicating to outsiders what was done in the program. Communication with outsiders concerning implementation is necessary with parents, other district personnel, and with the state education agency.

School districts often share their successful practices with other districts. These efforts to communicate will benefit from clear and practical descriptions of the important components of an instructional program that are related to student outcomes. This is especially important if the district wants to disseminate a pilot program throughout the district, or if the state wants to disseminate the program to other districts.

I wish I could say that the EAC East has been asked to develop and conduct workshops on this important topic, but the other pressing needs of school districts in the eastern half of the United States appears to have dominated our requests for technical assistance. One reason for this, I believe, is that few school districts feel that they have model programs that can be documented and prepared for dissemination to other districts. Another possible reason is that many programs do not have a uniform approach that all teachers have agreed upon. Instead, teachers use varied techniques depending on their own inclinations, experiences, and needs even though they supposedly are teaching in a single program. And a third reason may be that programs that are sufficiently advanced to realize the importance of program documentation already may have the technical capability to perform the documentation without additional technical assistance. Thus, although the EAC East has not been asked directly to provide technical assistance on program documentation, I want to stress that it is one of the ways that evaluation can lead to instructional improvement.

Summary

The way in which LEP students have been taught in the past has been less than effective and is in need of improvement. While there are a number of ways to improve instruction, as through training, materials redesign, technology, and so on, one of the more important ways is through the use of systematic feedback from program evaluation and assessment. Evaluation can be seen as an important key to school districts that are interested in improving their instructional approaches and thereby improving the changes of LEP students for success. Procedures for curriculum alignment, monitoring student progress, entry/exit assessment, and program documentation all can have a useful impact on the way in which districts instruct LEP students. The Georgetown University EAC East provides technical assistance in these and other areas and looks forward to working with the Delaware Department of Public Instruction in the future.

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INTEGRATING LANGUAGE AND CONTENT: IMPROVING ACADEMIC ACHIEVEMENT FOR LEP CHILDREN

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INTEGRATING LANGUAGE AND CONTENT:
Improving Academic Achievement for LEP Children

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It is a pleasure for us to be here today to talk with you about what we (and many other researchers and teachers in the field) believe is an effective means of improving the academic achievement of language minority students in the United States.

To begin, perhaps it would be useful to review some of the rather sobering statistics about our school-age population in the United States and their academic achievement levels.

Because of both migration patterns and family size, the fastest growing population in the United States is the language minority population. Between 1975 and 1985, almost one million refugees entered the United States. The majority (650,000) arrived from Southeast Asia. However, substantial numbers also came from Eastern Europe, the Soviet Union, the Caribbean, and Africa and the Middle East. In addition, several million undocumented aliens from Central America and the Caribbean also have entered the country.

Moreover, Hispanic and Asian families are characteristically larger than those of the majority of Americans. Thus, it is not surprising that between the 1970 and 1980 census, the Hispanic population grew by 61%, the Asian and Pacific population grew by an astounding 127.5%, and the American Indian, Eskimo, and Aleut population grew by 71.7%.

Because of the new amnesty legislation (which will enable an estimated two million Hispanic undocumented aliens within the United States to become permanent residents and then citizens), we can expect the number of Americans who speak a language other than English in their homes to continue to grow.

What does this mean for our school age population? According to current estimates, there are approximately eight million school aged (5-17) children who live in households in which non-English languages are spoken. Of these, some three to five million are estimated to be limited English proficient.

If one looks at the major metropolitain areas throughout the United States, one finds that in many cities, the MAJORITY of the school-age population is language minority. In 1983, minority students constituted the majority of school enrollment in 23 of the nation's largest cities. In some cities, the percentage is as high as 70%. If current trends continue, we can expect that 53 of the major American cities will have a majority minority language population by the year 2000.

You might think, though, that this is a characteristic of only urban areas. However, in a 1981 study, O'Malley and Waggoner found that approximately one half of the teachers in the United States were currently teaching or have had one language minority limited English proficient student

in the classroom, and as you can see by the statistics on population growth, that number is only going to increase. In fact, as O'Malley and Waggoner found, increasing numbers of public school teachers report that they are teaching English as a second language at least for part of their instructional day.

This can be a cause for consternation or joy, or both. Given the increasing interdependence in the world, the importance of international trade and commerce, and the global competition we in the United States are facing, we should be bouyed by the realization that we have so many young Americans as language and cultural resources: children who already speak languages which are critical to our success in international trade and policy negotiations.

However, there is also a cause for concern. We are not doing a very good job of educating many of these language minority students, especially the Hispanic children. We aren't even keeping them in school.

Hispanics experience approximately double the dropout rate of either Blacks or Anglos at most ages. Approximately 40% drop out before grade 10; an additional 10% drop out before graduation. Of those who attend high school, approximately 35% are enrolled in vocational programs; only 25% are in an academic track.

Of those who continue their education, the majority will attend 2-year colleges. Few transfer to four-year colleges. For example, in 1981, Hispanic students comprised only 3.7% of the full-time undergraduate college population and 2.2% of the graduate students in American colleges and universities (with only 16% of the eligible Hispanic college-age population enrolled).

The choice of majors of those who do attend four-year colleges is also instructive. The majority pursue careers in the social sciences, education, or business; very few pursue scientific or technical courses of study. Hispanics are disproportionately under-represented in scientific and technical fields such as physics, computer science, or engineering -- yet these are fields which are rapidly growing and in which much of the future of our country rests.

What are the causes for this disproportionate academic underachievement by Hispanics and other language minority children?

There are many: socio-economic background, available role models in the family or community, prior education of parents, etc. But, some part of the problem derives from the education which these students are receiving.

Let's review the programs we offer to language minority children. Generally, we give them one of three options:

1. They can enroll in bilingual education programs, where they get some of their education in their native language, while they are learning enough English (generally in ESL classes) to be able to be mainstreamed into all English instruction.

2. They can take English as a second language (ESL) either taught in classes or by a tutor, while they also take some classes taught in English.

3. Or they can be submitted to the 'sink or swim' school of education, submerged in an all English-speaking classroom, with the hope that they will finally make sense of both the English and the academic content being taught.

There are problems with all three approaches:

1. With bilingual education, we generally do not provide enough years of instruction in the native language to make the transition to all English instruction very profitable.

2. In ESL classes, we often do a very good job of teaching children the kinds of oral language skills they need to interact with their classmates and teachers, but we don't focus on the more complex academic uses of the language that they encounter in their math, science, social studies, or other academic instruction. In the terms of Cummins and others, we do a much better job of providing them with BICS (Basic Interpersonal Communicative Skills) than we do in helping them learn the CALP (Cognitive Academic Language Proficiency) which they will need to be successful in their academic coursework.

3. About the third, the sink or swim methodology, we will say very little, except to praise those children who succeed in school in spite of our efforts.

But let's return to the academic language skills which we discussed previously. It is possible in a bilingual education program to develop these skills and then transfer them to English. If schools, because of diverse populations (with too few students who speak any one language to be able to provide bilingual programming) offer ESL programs, they can teach academic language skills in the ESL classes.

But, it is sobering to note that it can take from five to seven years for children to learn the CALP which will enable them to compete with their English-speaking peers in solving math problems, doing science experiments, analyzing the causes or effects of a particular historical event, or writing a comparison.

But we can teach children these academic language skills. To do so, we must rethink the role of both the language teacher and the content teacher.

The ESL teacher must become more of a facilitator, one who helps students acquire the academic vocabulary, thinking skills, and problem-solving skills which will be required in other classes, and who focuses more on language as a means, rather than an end. And, the materials to be used in the ESL classes must reflect the kinds of activities which will be required in the content classes.

The content area teacher, who is increasingly likely to have language minority children in class, must become more attuned to ways of helping these children learn, through demonstrating meaning, providing access to information through other than oral media (writing new terms on the board, taking time to define vocabulary, using pictures or objects or actions to make sure that everyone in the class understands the lesson), etc. Happily, many good teachers intuitively do that, recognizing that much of this is just plain good teaching -- good for English-speaking students as well as limited English proficient students. But others will need in-service education to enable them to adapt their teaching to make it relevant and appropriate to all students and to provide for the differential needs and learning strategies of their students.

In effect, we must make everyone responsible for the education of all students. Just as we have done an admirable job in helping all teachers to understand that they are teaching reading and writing (that it is not just the job of the reading specialist, the language arts program, or the English teacher), we must help all teachers to teach English as a second language across the curriculum, not replacing the ESL teacher (who may be the most important person the language minority student sees daily), but helping the ESL teacher in the teaching of English. We need also to help ESL and bilingual teachers to incorporate more academic language and skills in their courses.

To accomplish that, a number of researchers are working with teachers to define exactly what that academic language is as it applies to math, science, or other content areas and to help develop materials and methods to teach it.

The problems which language minorities have with mathematics language are illustrated by the following example, which was overheard on an airplane coming in for a landing at Washington's National Airport:

> Child 1: "Hey look! There's the Pentagon. You know, that building with six sides.
>
> Child 2: "Oh, you stupid Lucy! You don't even know what a Pentagon is.

Now, you might ask: Is Lucy's problem linguistic? Mathematical? Neither? A little of both? Linguistically speaking, it's not clear that Lucy has a problem at all, since she succeeded in her communicative intent of referring to an important government building which happens to have five sides. However, if Lucy really believed that pentagons have six sides, then one might be more concerned.

We and other colleagues at the Center for Applied Linguistics (CAL) have been spending a great deal of time analyzing similar pieces of conversation (we call them "problem-solving protocols"), trying to decide what linguistic difficulties exist for language-minority children, and ultimately designing materials and curricula to help them in their mathematics and science classes.

Handout I, "Syntactic, Semantic and Pragmatic Features of the Mathematics Register," (see page 32) describes the major categories of difficulties which our research has uncovered. (Please note that our categories and examples are meant to be suggestive and by no means exhaustive.)

Linguists like to divide the world into four pieces: phonology, syntax, semantics and pragmatics. The handout has three of these pieces represented (we left out phonology because there don't seem to be any problems unique to mathematics, even though terms like "Pythagorean Theorem" are probably pretty hard for foreign students to pronounce at first). In the category of "Syntactic Features," i.e., the characteristic formal patterns for mathematics language which tend to cause problems for language-minority students, we noticed frequent use of comparative structures, prepositions in two- and three-word verbs, passive voice, logical connectors and reversal errors. The examples under A, B, C, and E in your handout are fairly clear, but you should realize that these structures are often not introduced to students until after they have been mainstreamed into math classes. The assumption that students can enter mathematics classes before completing their English studies can result in students who are not linguistically prepared to understand teacher and textbook explanations.

The reversal error listed under D bears some discussion here. When students fail to understand word problems, it is common for them to rely on surface word order to derive the mathematical formulae needed to solve the problem. Thus, students are likely to incorrectly write "a = 5 - b" instead of the correct equation "a = b - 5" when asked to represent the sentence "The number a is five less than the number b." The reason is that they tend to follow the left to right order in which variables and numbers appear in the sentence without regard to interpretation.

If you'll now look at the section labeled "Semantic Features", you'll see three types of difficulty encountered by the students we interviewed. The first is labeled "Lexical," or the problems in vocabulary which we might expect language minority students to have. Number 5, "families of related vocabulary" is especially interesting. It is important to realize that when students are presented with word problems, there is great variation in the vocabulary used in those problems. Thus, a simple addition problem such as "What do you get if you add two apples to three apples?" takes on greater complexity when presented as "Two apples increased by three apples equals how many apples?" The reason, of course, is that students are likely to be more familiar with the word <u>add</u> in the present conditional than they are with the two-word verb <u>increased by</u> in the past tense followed by the verb plus noun phrase <u>equals how many apples</u>. In cases such as these, students with adequate math skills are likely to give incorrect answers or exhibit total frustration due to the language barrier.

Under the heading "Referential," we see the semantic side of the reversal error we looked at in connection with the syntactic features. When students are required to translate word problems into mathematical formulae involving unknown quantities, convention dictates the use of lower case letters such as a, b, c, and so on, to represent these unknowns. These lower case letters, or variables, are a source of semantic difficulty on at least two counts. First, whereas the numbers represented by the variables are unique, different variables can represent identical numbers. Thus, since variables a and b might both have the value 5, a is equal to b, a fact that can be confusing to students who wish to know what a given variable stands for.

Second, students often fail to realize that variables are used to represent unknown quantities and that they are not labels for qualified objects. For example, when asked to represent the expression "There are five times as many students as professors in the ESL department," students tend to incorrectly write 5S=P instead of 5P=S because they think that the former says that there are five students for every professor. What they should be saying is that five times the number of professors in the department is equal to the number of students.

Perhaps the most interesting of all the categories on the "Features" handout are the "Pragmatic Features." Pragmatics is the branch of linguistics which studies the extra-grammatical aspects of language use, thereby bringing such things as human knowledge, beliefs and intentions to bear on linguistic explanations. In mathematical problem solving it is very important that students have a knowledge both about mathematical principles and the contexts in which mathematical principles apply. Thus, we have divided the "Pragmatic Features" into two sub-categories: "Epistemological" and "Contextual".

Under the first subcategory, we have recognized several types of difficulty:

1. Lack of knowledge: Students might simply lack any knowledge of business concepts like discounts or markups;

2. Restricted experiences or knowledge: Students might attempt to apply restricted knowledge to problems which require a broader point of view. For example, when asked to find tax rates, some students attempt to invoke local rates as all purpose solutions. Thus, for some students in Miami, Florida, where the sales tax rate is 5%, the answer is always 5% regardless of what the problem says or doesn't say about the location;

3. Conflicting experiences or knowledge: Since the tax rate is not normally unknown in actual situations, some students resist the invitation to find tax rates when they are posed in math classes or texts;

4. Contradictory experience or knowledge: Students are apt to become disillusioned when they attempt to apply what they have learned in class to real life situations. For example, whereas students are taught to apply a conventional rounding-off procedure for decimals .5 or higher, such a procedure is not always followed on actual tax-rate charts.

Under the sub-category, "Contextual", it is important to recognize both the decontextualized nature of standard math curricula and the lack of natural interaction in traditional math classes. In other words, traditional mathematics classes do not usually include materials or activities which make reference to real-life situations using conversational discourse. Students rarely are encouraged to participate in classroom discussions, and materials are usually written in formal, impersonal prose which is beyond the linguistic competence of many students, both native and non-native speakers of English.

The kinds of difficulties which appear on your "Features" handout can be seen more clearly in the context of problem-solving sessions which we have conducted with groups of community college and secondary school students. One such protocol is furnished on Handout 2 (page 33). In the first one, a student from Bangladesh (transcripts 1 and 3) and two Hispanic students (transcript 2) are attempting to solve a sales tax problem. In the left-hand margin, we've indicated our best guess of the type of linguistic problem with which the students are grappling. So, for example, when the student from Bangladesh indicates confusion over the meaning of the expression <u>on the purchase of</u> we might surmise that a lexical problem (LEX) exists. When the student makes reference to how such problems are stated in his native tongue (Bengali), he reveals that there is a difference in the way one can think about the problem, namely, a difference in whether the sales tax is added to or subtracted from the purchase price before calculating the sales tax rate. Such a problem would seem to be pragmatic (PRAG) since it suggests that certain facts must be known before an answer is possible.

As for the Hispanic student in Transcript 2, we can clearly see an attempt to make the problem conform to a preconceived notion of what the sales tax rate is. Since it is 5% in Miami, S1 starts off by proposing the answer and then attempts to set the problem up in a way which will yield the answer. This is clearly a pragmatic phenomenon. However, there also seems to be a syntactic difficulty (SYN) since S2 incorrectly suggests that S1 divide 500 by 15 and S1 responds by dividing 15 by 500. The fact that S1 actually derives the correct answer, 3%, is baffling given the pragmatic and syntactic confusion which is evidenced here.

We think you've seen enough to get the flavor of the kind of analysis we're attempting to promote. In closing, we would like to point out three pedagogical implications of our research.

First, there is a clear need for integrated language and content instruction. Normally, this is taken to suggest that language teachers be trained to incorporate more content into their language classes so that students will become proficient in the language of their content classes

before they are mainstreamed. In practice, such a notion does to always work because language teachers are either not qualified to teacher such things as mathematics and science or, even if they are qualified, there is an unwillingness on the part of content teachers to allow their role to be usurped by language teachers. Thus, as a natural complement to content based language instruction, we would like to promote language-sensitive content instruction as a useful way to satisfy the needs of language minority students. Such instruction calls for increased sensitivity on the part of content teachers and an expanded-role for language teachers as consultants to content teachers.

Second, in order to implement an integrated language and content program, it is necessary to provide training to both language and content instructors which encourages them to work cooperatively in the design of an integrated curriculum. Recently, we have been working with, Terry Dale, a colleague at the Center for Applied Linguistics, training intermediate school math and ESL instructors in the materials which integrate language and math content. Perhaps the most exciting part of this training has been the ability of the language teachers to overcome their initial reluctance to utilize math content and of the math teachers to grasp and apply fundamental language teaching strategies such as the use of communicative classroom activities.

Finally, a great deal needs to be done to create materials which can be used in content-based curricula for specific mainstream courses such as social science, life science, earth science, etc. This will require outlays of money by local education agencies to allow for collaboration on the part of language and content teachers. While some of the major publishers are beginning to grasp the importance of language-sensitive content textbooks, we believe that the best hope lies at the local level. Since each school district, indeed each school within a school district, has its own peculiarities, we need to encourage teachers to become more actively involved in the development of materials and curricula. If we've learned anything at all about integrating language and content it is that input from both language and content teachers is absolutely required if we are to serve the pressing needs of language minority students.

HANDOUT 1

SYNTACTIC, SEMANTIC AND PRAGMATIC FEATURES OF THE MATHEMATICS REGISTER

I. Syntactic Features
- A. Comparatives (Hilda earns six times as much as Jack does)
- B. Prepositions (divided into vs. divided by)
- C. Passive Voice (x is defined to be greater than or equal to zero)
- D. Reversals (The number a is five less than the number b; a=b-5, not a=5-b)
- E. Logical Connectors (if...then, given that, if and only if)

II. Semantic Features
- A. Lexical
  1. new technical vocabulary (binomial, coefficient, denominator)
  2. terms with a special meaning in mathematics (power, rational, equal)
  3. complex phrases (least common denominator, negative component, the quantity y + 3 squared)
  4. symbols and notations (2.232 vs 2,232; x/y vs x : y)
  5. families of related vocabulary (subtract, less, less than, differ, decreased by)
- B. Referential
  1. articles/pre-modifiers (five times a number is two more than ten times the number)
  2. variables (there are five times as many students as professors in the ESL department; 5P=S not 5S=P)
- C. Vague Problems and Directions (food expenses take 26% of the average family's income. A family makes $700 per month. How much is spent on food?)
- D. Similar Terms/Different Functions (less/less than, square/the square root, multiply by/increased by)

III. Pragmatic Features

Epistemological
1. lack of experience or knowledge (discount, markup, retail, markup, sales tax)
2. restricted experience or knowledge (attempts to substitute known tax rate for unknown tax rate in word problems)
3. conflicting experience or knowledge (inability to solve for tax rate because this is normally known in real life contexts)
4. contradictory experience or knowledge (conventional rounding off procedure vs. the procedure used on sales tax charts)

- B. (Con)Textual
  1. decontextualized nature of standard math curricula and materials
  2. lack of natural interaction in math classes

HANDOUT 2

Problem 1: The sales tax is $15 on the purchase of a diamond ring for $500. What is the sales tax?

Transcript 1 (S = student; R = researcher)

LEX S1: ... That makes me confused sometimes in understanding <u>on the purchase of a diamond</u> ...?

R: Oh, this phrase, <u>on the purchase of a diamond</u> ...?
S1: Right.
R: ... confused you. What is the term <u>on</u> that ...?
PRAG S1: Yeah, ok. I was, in my language what you sometimes have to do that, suppose the if you purchase, like the purchase of 500, 500 dollars and sometimes we do like that way. It makes understanding a problem...
S1: ... now I'm saying that the 15 <u>on</u> the 500 dollars included in the 500 like 485 plus 15 dollars is 500. My purchase is 485 so I would like to say that the prepositional phrase <u>on the</u>, like suppose a customer bought 500 dollars goods and he paid 15 dollars tax on that and what percent sales tax did he pay on 500 dollars. Like that way you know?

Transcript 2

PRAG S1: Well, we know here in Miami it's 5%. So you have to divide by... Ok. 15 over 100, I mean 500. I don't know.
SYN S2: Can I help? I suggest that you divide 500 by 15 and that will give you the rate.
S1: Right!
R: Tell me again. You divide 500 by ...
S1: 15
R: Let's do it again and see what we get.
(S1 calculates the answer)
S1: Ok. It's 3%

Transcript 3

S2: The $15 is the sales tax and the price of the ring is 500, so it would be 515 dollars. But now how do I get the sales tax <u>rate</u>? What do I have to do? Divide?
R: Keep going.
PRAG: S2: What I'm thinking is...but then again, maybe it isn't plus 5%.

LEX = lexical difficulty
SYN = syntactic difficulty
SEM = semantic difficulty
PRAG = pragmatic difficulty

Handout 3

Problem 7: Read the passage which follows. Then answer the questions: The earth is surrounded by a layer of air. This is between 150 and 200 km thick and is called the atmosphere. Air is invisible and therefore it cannot be seen. But it occupies space and has weight in the same way visible substances do. (adapted from Allen and Widdowson, English in Physical Science)

a. Is air a substance? How do you know?
b. What are some substances that are similar/different to air? How are they similar/different?

Transcript 1

R: What's a substance? What do you think? Can you figure it out from there?
S1: It's...um... (long pause)
R: It's okay. What are some substances. Let's try that.
S1: Like chemical substances?
S2: Like the water?
R: What do they all have in common that would make them a substance?
PRAG S3: They're the same color.
R: Is water the same color as acid?
PRAG S1: No.
R: Not always. Read that again and see if you can find out what a substance is.

.
.
.

S1: It's something that has weight and occupies space.

.
.
.

R: Okay, what are some other substances that are similar to air?
S2: Water.
R: Why is it similar?
SYN/PRAG S2: Because the water is not invisible, but you cannot see like color.

Transcript 2

R: Well, Terry, while Quoc (S3) is thinking about [whether air is a substance], can you tell me why you think air is a substance?
PRAG S1: Well, because I know it's invisible, but every time you have a hurricane, it [blows] and it makes the trees and houses move.
S1/S2: Weight.
R: It has weight and ...
S1: Space.
R: It occupies space. It's somewhere. You can't see it...
PRAG S3: You can see it.
PRAG S2: Like when (unintelligible) with a balloon, and it makes the balloon bigger.

ISSUES IN INTEGRATING LANGUAGE AND CONTENT INSTRUCTION

THEORETICAL RATIONALE

- Second Language Acquisition
- Cognitive Skill Acquisition

CONTENT-BASED PROGRAMS

- Model programs using content to teach language
- Model programs using language to teach content

CONTENT-BASED METHODS

- Demonstration/Participation
- Peer group interaction
- Cooperative learning

CONTENT-BASED MATERIALS

- Simplified, adapted or supplemented curricula
- Graphic aids, maps, charts
- Materials encouraging group and pair work
- Supplementary materials such as vocabulary lists
- Teacher resources, guides

Willetts, 1987

STAFF DEVELOPMENT

- Train language teachers to integrate content
- Train content teachers to integrate language
- Methods for language development and concept development
- Strategies for simplifying language and content concepts
- Taxonomy of effective teaching practices and activities
- Cooperative/Team-teaching

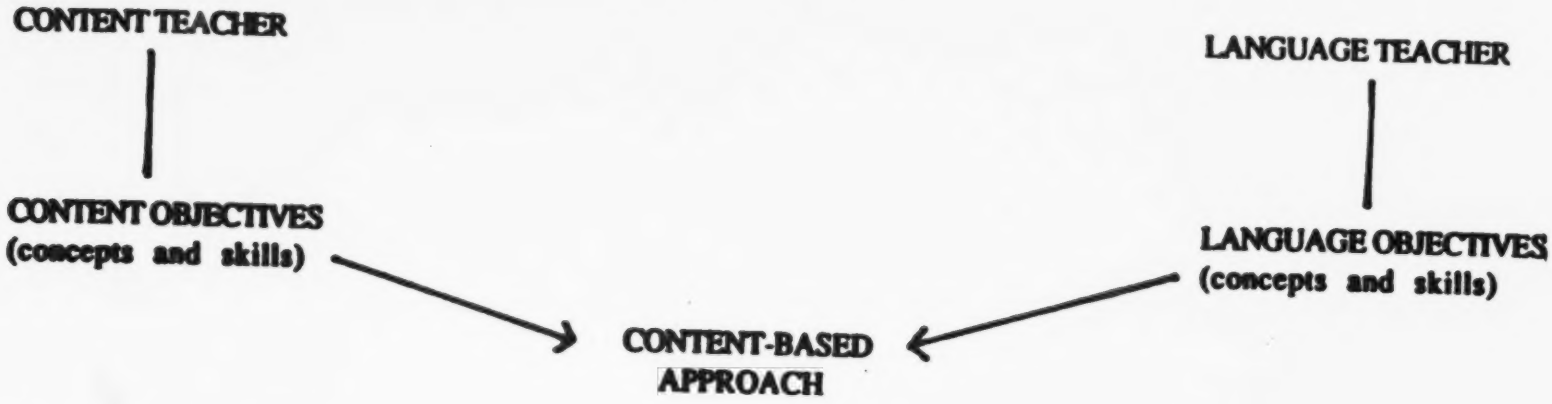
STUDENT ASSESSMENT

- Evaluation of both language proficiency and academic content skills acquired
- Placement and advancement concerns for different student ability in language vs. content or vice-versa

RESEARCH

- Document program models and determine their relative effectiveness
- Identify characteristics of effective materials and establish evaluation criteria
- Collaborate with teachers and researchers

INTEGRATING LANGUAGE AND CONTENT INSTRUCTION



- identification of content related to the language skills
- curriculum for specific content areas
- instructional methods for teaching content
- assessment of content learning

CONTENT TEACHER can now adapt instruction to meet needs of limited language proficient students

- application of instructional methods which integrate language and content
- principles for developing/ adapting instructional materials which integrate language and content
- identification of relationship between content and language skills
- strategies for assessment of students' language skills as well as content area concepts and skills

- identification of language skills related to the content
- curricula for specific language learning
- instructional methods for teaching language
- assessment of language learning

LANGUAGE TEACHER can now adapt language instruction to focus on academic language skills

STRATEGIES FOR INTEGRATING LANGUAGE AND CONTENT INSTRUCTION SCIENCE

Patricia Chamberlain, Mary Ellen Quinn, George Spanos

Purpose

This strategy can be used to integrate language and content instruction in science classes with a laboratory focus. Table I indicates how lessons can be created for different grades and proficiency levels through the implementation of unique language foci (lf) and cognitive foci (cf) for each grade/proficiency slot.

TABLE I: TEACHING SCIENTIFIC CONCEPTS

	LOW	INTERMEDIATE	ADVANCED
Primary (4th-5th)	cf: observation lf: unstructured discussion, note-taking, yes-no	cf: explaining, inferring, predicting lf: structured discussion, structured note-taking, *if*-then (real), future tense, passives, adjective clauses	cf: hypothesizing, synthesizing, experimenting lf: structured group work, structured reports, if-then (real, unreal), quantifiers, modal verb phrases, noun clauses
Secondary (9th-10th)	cf: observation lf: unstructured vocabulary recognition, library work, illustrating conclusions	cf: explaining, inferring, predicting lf: guided reading, text divisions, pre-reading, writing informal conclusions	cf: hypothesizing, synthesizing, experimenting lf: writing/expressing complete conclusions, completing standard reports, doing science projects
Tertiary	cf: observation lf: mastery of key vocabulary	cf: explaining, inferring, predicting lf: mastery of technical vocabulary, technical reading, lecture and note-taking skills	cf: hypothesizing, synthesizing, experimenting lf: synthesizing lectures in writing, using science journals, writing technical reports

Table II illustrates the implementation of the strategy at the primary school level for a specific scientific concept: Air has pressure because it weighs something.

TABLE II: TEACHING A SCIENTIFIC CONCEPT
(Air has pressure because it weighs something)
(PRIMARY GRADES - ALL PROFICIENCY LEVELS)

PROFICIENCY LEVEL		METHODS
LOW	cf: observation lf: unstructured discussion, note-taking, yes-no questions, imperatives	Teacher fills glass with water. Slides card over top, making sure it's tight. Turns glass upside down holding hand flat over card. Removes hand. Asks students what they have observed. Teacher describes each activity while demonstrating. Students work in small groups, observing what works.
INT	cf: explaining, inferring, predicting lf: structured discussion, structured note-taking, if-then (real), future tense, passives, and adjective clauses	As above + students record results on prepared form which classifies what happens under different conditions, e.g., fast/slow, tight/loose, type of glass. Teacher elicits responses
ADV	cf: hypothesizing, synthesizing, experimenting lf: structured group work, structured reports, if-then (real and unreal), quantifiers, modal verb phrases, noun clauses	As above + students write their own conclusions after group discussion. Group recorders write this down and each student gets a copy of the record. Students add hypotheses and conclusions. Groups report to the class. Reports handed in to teacher.

Materials

The materials necessary for this experiment are:

- water
- towels
- pans or sinks
- pencils and paper
- medium size glasses (glass or plastic - styrofoam doesn't work)
- stiff cards of various sizes, e.g., index cards

The Basic Approach

Using these materials, the following experiment may be conducted for any of the grade/proficiency levels indicated in Table I.

Step 1: Write on the board and state orally: Air has pressure because it weighs something.
Step 2: Fill a glass to the top with water. (explain orally)
Step 3: Slide a card over the rim making sure the seal is tight. (explain orally)
Step 4: Turn glass upside down holding hand flat over card. (explain orally)
Step 5: Remove hand and ask students to comment on what they have observed, eliciting relevant vocabulary.
Step 6: Divide class into small groups (2-3 students each). Each group is asked to re-enact the experiment, keeping a record of when it does and doesn't work.
Step 7: Re-convene class and have group members relate results.

Extensions and Variations

The steps for the basic experiment are appropriate for the elementary school level, particularly grades 5-6. The primary cognitive focus is observation, which can be expressed linguistically through simple, unstructured discussion and/or note-taking activities. The instructor may want to incorporate some higher level cognitive foci at the intermediate proficiency level. In this case, the following steps may be addeed to the basic experiment.

6b. Tell groups to record results on a prepared form which classifies what happens under different conditions. For example:

- glass not filled to the top with water _____
- card not large enough to fit over rim _____
- hand removed too quickly _____
- card not stiff enough _____
- glass made of styrofoam _____

7b. Ask students to relate what happened under the varying conditions and to provide an explanation.

At the advanced proficiency level, the experiment can be expanded to include the following steps:

6c. Have each student write his/her own conclusion(s).
6d. Assign a group recorder the task of collecting all the conclusions, writing down, and reporting to the group the various conclusions. Students in each group then add hypotheses and conclusions.
7c. Have each group make a report to the class. This may be structured according to a standard report form.
7d. Collect written group reports and return them at a later date with comments and perhaps allow for further discussion.

Table I indicates variations that may be used for the secondary and tertiary grade levels. The language foci might be altered to include more sophisticated activities such as library work, science reports and projects, mastering technical vocabulary, and so on. Decisions will, of course, depend upon whether the class is an ESL class or a mainstream class, as well as upon the nature of the specific experiment being used.

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Note about Series

This strategy sheet is one of a series of products prepared by participants in a seminar on Methods of Integrating Language and Content Instruction, held at the Center for Applied Linguistics in January 1987. The support of the Department of Education through the Center for Language Education and Research and the Ford Foundation is gratefully acknowledged.

STRATEGIES FOR INTEGRATING LANGUAGE AND CONTENT INSTRUCTION SOCIAL STUDIES

Melissa King, Stephen Matthiesen, Joseph Bellino

Purpose

This strategy introduces and reviews important events, people, dates and concepts in the social studies content area using color-coded sentence strips. As constituents of sentences are manipulated, content information is presented and the following language foci are addressed:

- develop sentence structure and vocabulary
- review WH-questions
- promote oral language proficiency and the transition to reading/writing

Language level

Beginning to Intermediate

Educational level

Grade one or higher

Materials

Strips of colored paper and colored cards
Colored markers
Pocket chart (optional) for visual display
Magnetic tape (optional) for display of cards/sentences on magnetic chalkboard or thumbtacks for display on bulletin board.

The Basic Approach

This strategy involves the use of color-coded sentence strips to present content information and develop a variety of language skills.

Step 1: Prepare the following materials:

- color-coded sentence strips with content information which is to be focus of lesson(s)
- color-coded WH-question cards which correspond to specific sentence parts on the colored strips
- color-coded word cards which contain key words/phrases from the target sentences

Example:

Cortez	went from Spain	to Mexico	in 1519	to look for gold.
blue	red	green	purple	orange

Who	from Where	Where	When	Why
blue	red	green	purple	orange

Alternate question cards:

What was his name?	What country was he from?	What place?
blue	red	green

What year?	What reason?
purple	orange

Step 2: Introduce content information on "World Explorers" to students by:

a. breaking target sentences into constituent parts (build up sentence constituent by constituent; tape or tack strips to board as they are added; have students repeat or read constituents as they are added);
b. eliciting appropriate responses to WH-questions about the content (ask questions about each constituent as it is added, then review by asking basic questions and alternate forms after complete sentence developed);
c. eliciting appropriate WH-questions to correspond with given content information (point to the answer and have students supply the question);
d. distributing question cards and word cards to students for physical response drills; and
e. distributing word cards to students so they can reconstruct target sentences by standing up in correct order.

Step 3: Encourage student-student interaction with color-coded cards and sentence strips. Have students pair up to practice with each other.

Step 4: Move from oral practice into writing activities:

a. have students write appropriate content information or WH-question following an oral cue
b. have students write target sentences when given a word or phrase as an oral stimulus
c. have students create new sentences (following the structural pattern) when given additional content information

Extension:

Model other similar sentences for an oral and/or written review.

For example: 1. Cabot went from England to the east coast in 1497 to find a trade route.
2. Cartier went from France to Canada in 1534 to find a trade route.
Ask questions: who? what country? where? when? why?

Other Uses

This strategy could be easily adapted to other social studies units as well as other content area subjects.

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Note about Series

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APPENDICES

APPENDIX A

DELAWARE
ANNUAL DROPOUT RATES
AND
GRADUATION RATES
CLASS OF 1986

PRESENTED TO THE
DELAWARE CONFERENCE
ON THE EDUCATION OF CHILDREN
OF LIMITED ENGLISH PROFICIENCY

BY
ROBERT F. BOOZER
PLANNING, RESEARCH, AND EVALUATION DIVISION
DEPARTMENT OF PUBLIC INSTRUCTION
DOVER AIR FORCE BASE OFFICERS' CLUB
DOVER, DELAWARE
MAY 19, 1987

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GRADUATION RATE

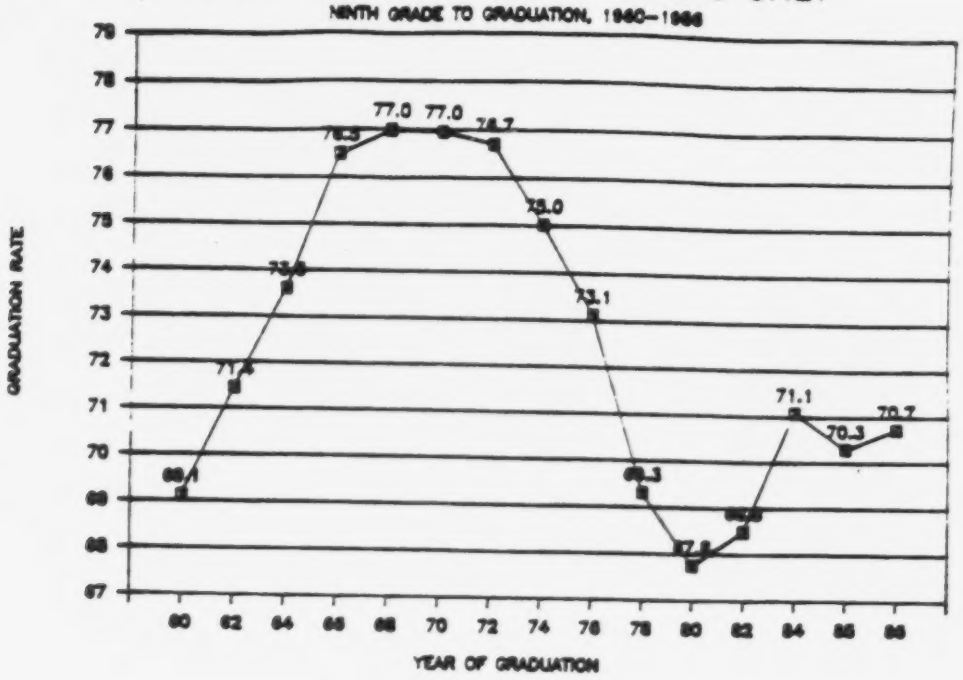
NINTH GRADE TO GRADUATION

GRADUATION RATE

THE PERCENTAGE OF PUPILS ENROLLED ON SEPTEMBER 30 OF THE NINTH GRADE WHO GRADUATE FOUR YEARS LATER

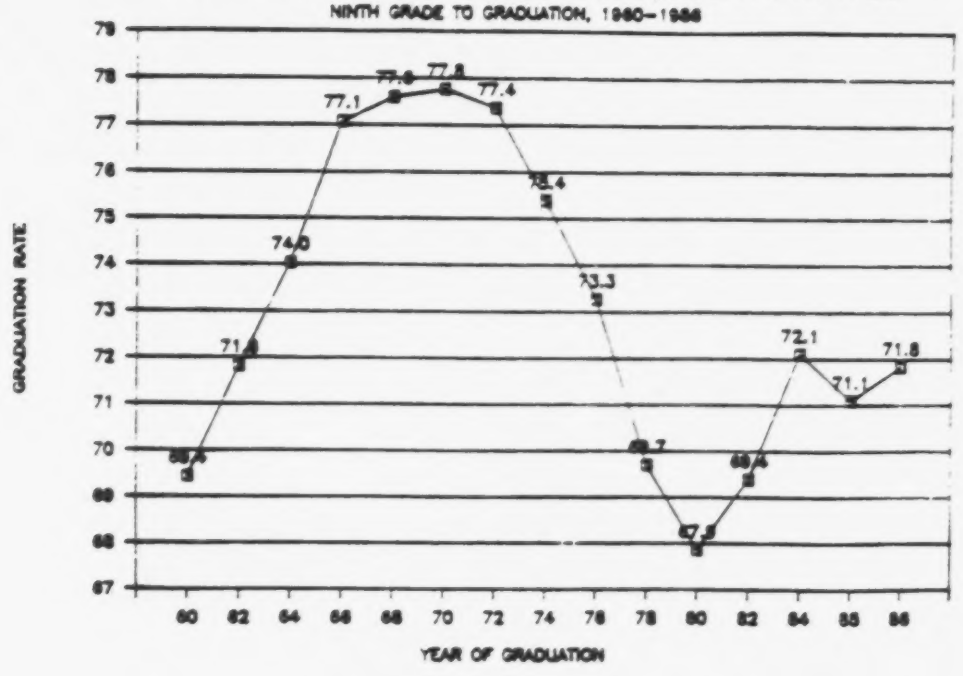
GRADUATION RATES, DIPLOMAS ONLY

NINTH GRADE TO GRADUATION, 1960–1986



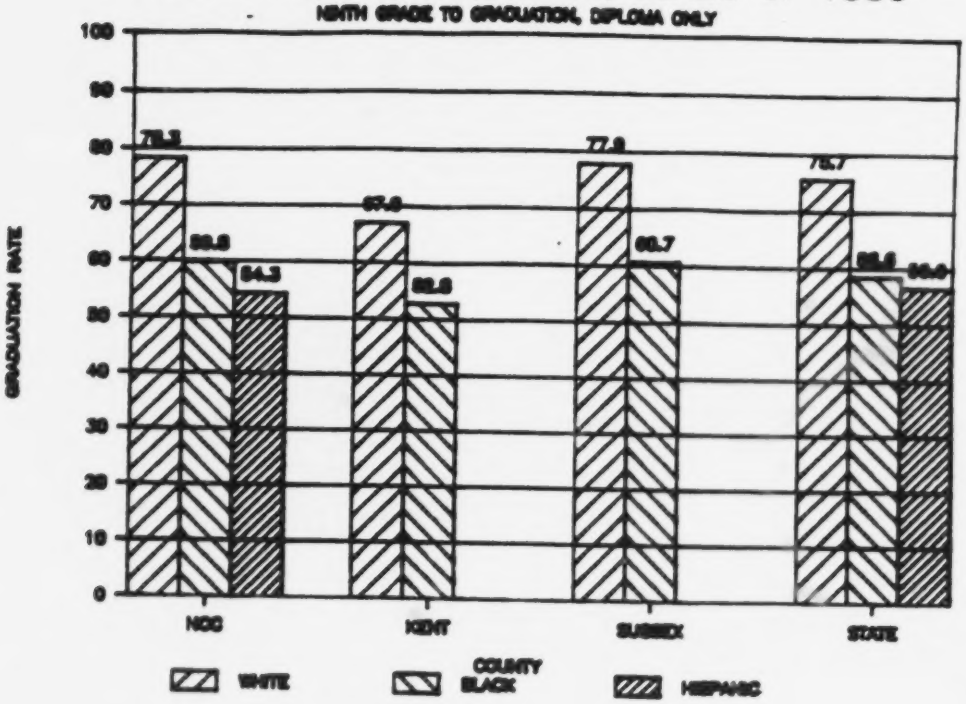
GRADUATION RATES, DIPLOMAS/CERTIFICATES

NINTH GRADE TO GRADUATION, 1960–1986



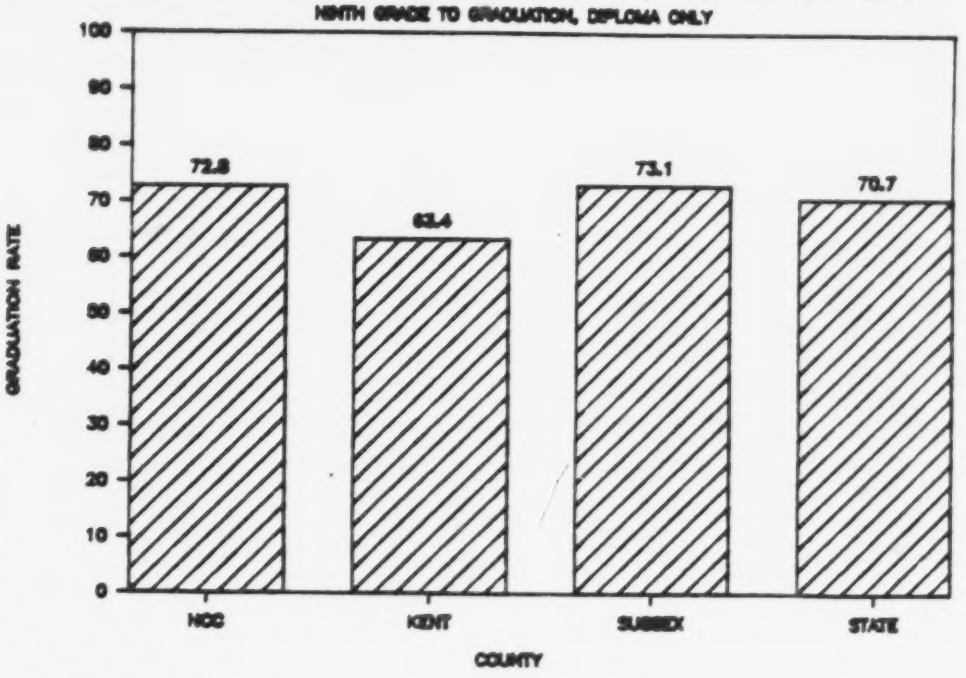
GRADUATION RATE BY RACE, CLASS OF 1986

NINTH GRADE TO GRADUATION, DIPLOMA ONLY



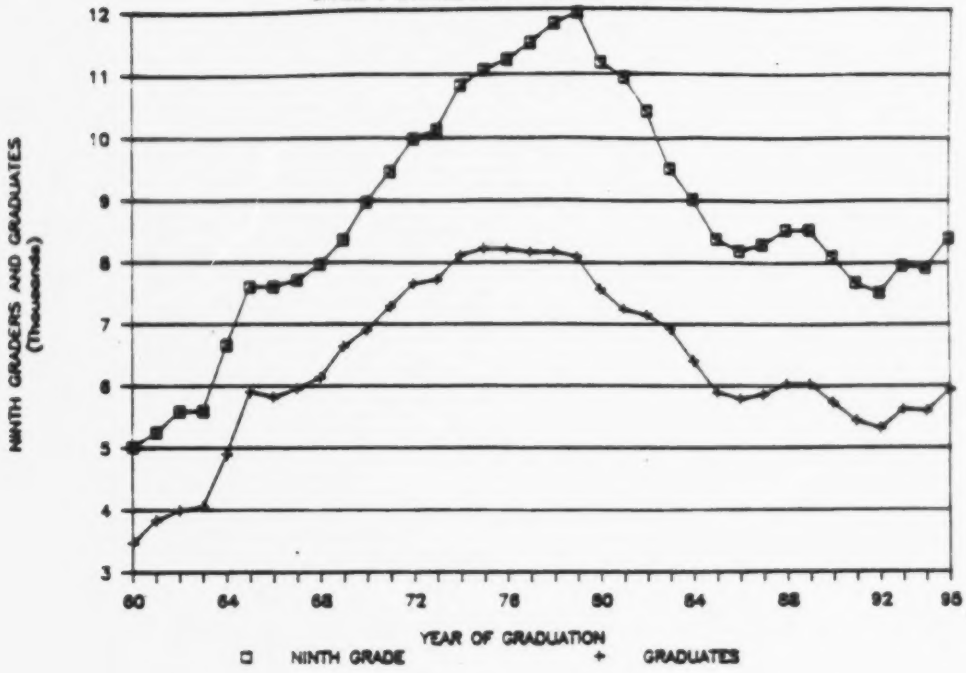
GRADUATION RATE BY COUNTY, CLASS OF '86

NINTH GRADE TO GRADUATION, DIPLOMA ONLY



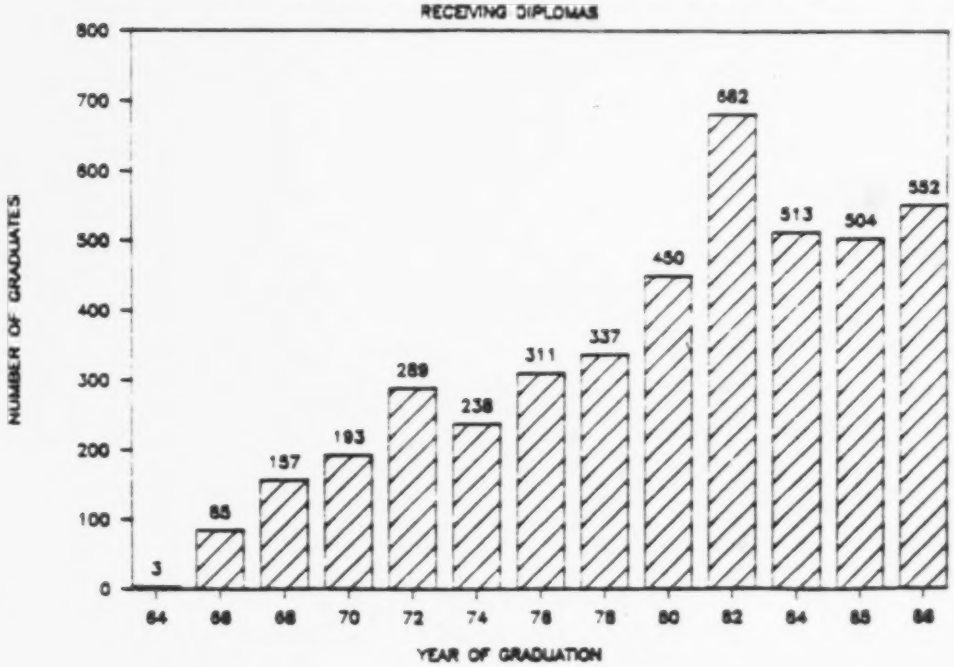
DAY SCHOOL DIPLOMA GRADUATES

GRADE 9 ENROLLMENTS FOUR YEARS EARLIER



GROVES EVENING SCHOOL GRADUATES

RECEIVING DIPLOMAS



STATEWIDE GRADUATION RATES
DIPLOMA GRADUATES ONLY

- GRADUATION RATES IN DELAWARE REACHED ALL-TIME HIGHS BETWEEN 1966 AND 1972 (APPROXIMATELY 77 PERCENT) AS MANY STUDENTS REALIZED THE ADVANTAGE OF OBTAINING HIGH SCHOOL DIPLOMAS BEFORE BECOMING ELIGIBLE FOR THE MILITARY DRAFT.

- BEGINNING IN 1974, A PRECIPITOUS DROP IN PUBLIC SCHOOL GRADUATION RATE BEGAN AND CONTINUED UNTIL 1980 AS STUDENTS TRANSFERRED TO PRIVATE SCHOOLS IN ANTICIPATION OF AND FOLLOWING THE 1978 U.S. DISTRICT COURT DESEGREGATION ORDER, REACHING A LOW OF 67.8 PERCENT.

- SINCE 1984, THERE HAS BEEN A NET TRANSFER OF STUDENTS BACK FROM PRIVATE TO PUBLIC SCHOOLS RESULTING IN HIGHER PUBLIC SCHOOL GRADUATION RATES THAN WOULD OTHERWISE BE THE CASE.

- THE STATEWIDE GRADUATION RATE FOR THE CLASS OF 1986 WAS 70.7 PERCENT.

COUNTY GRADUATION RATES
DIPLOMA GRADUATES ONLY

- IN NEW CASTLE COUNTY, 54.3 PERCENT OF ALL HISPANIC STUDENTS ENROLLED IN THE NINTH GRADE GRADUATED WITH THEIR CLASS FOUR YEARS LATER WHILE 78.3 PERCENT OF ALL WHITE STUDENTS GRADUATED.

- IN KENT COUNTY, 52.8 PERCENT OF ALL BLACK STUDENTS ENROLLED IN THE NINTH GRADE GRADUATED WITH THEIR CLASS FOUR YEARS LATER, WHILE 67 PERCENT OF ALL WHITE STUDENTS GRADUATED.

- IN SUSSEX COUNTY, 60.7 PERCENT OF ALL BLACK STUDENTS ENROLLED IN THE NINTH GRADE GRADUATED WITH THEIR CLASS FOUR YEARS LATER, WHILE 77.9 PERCENT OF ALL WHITE STUDENTS GRADUATED.

NUMBER OF DAY AND EVENING SCHOOL DIPLOMA GRADUATES

* THE NUMBER OF DAY SCHOOL DIPLOMA GRADUATES IN DELAWARE REACHED AN ALL-TIME RECORD HIGH OF 8,235 IN 1975.

* THE NUMBER OF DAY SCHOOL GRADUATES IS EXPECTED TO DECLINE UNTIL 1992 REACHING A LOW OF 5,317.

* AFTER 1992, THE NUMBER OF DAY SCHOOL GRADUATES IS EXPECTED TO RECOVER TO 6,000 BY 1995 AND CONTINUE TO INCREASE INTO THE NEXT CENTURY.

* THE NUMBER OF EVENING SCHOOL DIPLOMA GRADUATES REACHED AN ALL-TIME HIGH OF 682 IN 1982, WHILE 552 STUDENTS GRADUATED WITH THE CLASS OF 1986.

ANNUAL

DROPOUT RATE

GRADES NINE THRU TWELVE

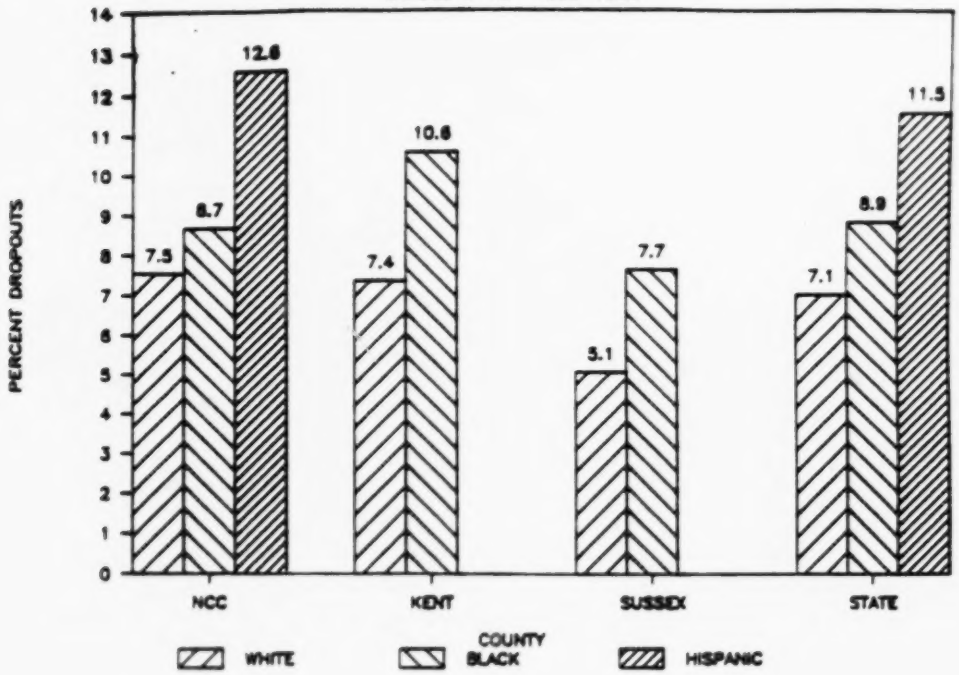
ANNUAL DROPOUT RATE

DROPOUT...A PERSON WHO LEAVES SCHOOL DURING A GIVEN SCHOOL YEAR FOR ANY REASON OTHER THAN TRANSFER TO ANOTHER DAY SCHOOL OR DEATH. THE LOCAL DISTRICTS REPORT THE NUMBER OF DROPOUTS MONTHLY TO DPI.

DROPOUT RATE...THE PERCENTAGE OF PUPILS ENROLLED ON SEPTEMBER 30 WHO DROPOUT DURING THAT SCHOOL YEAR.

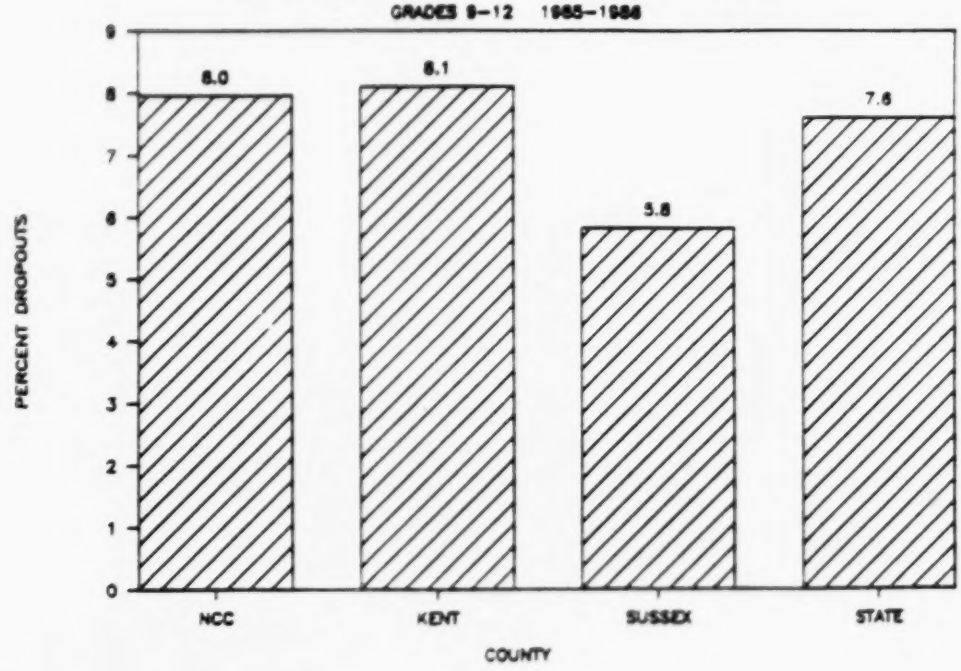
DROPOUT RATES BY COUNTY BY RACE

GRADES 9–12 1985–1986



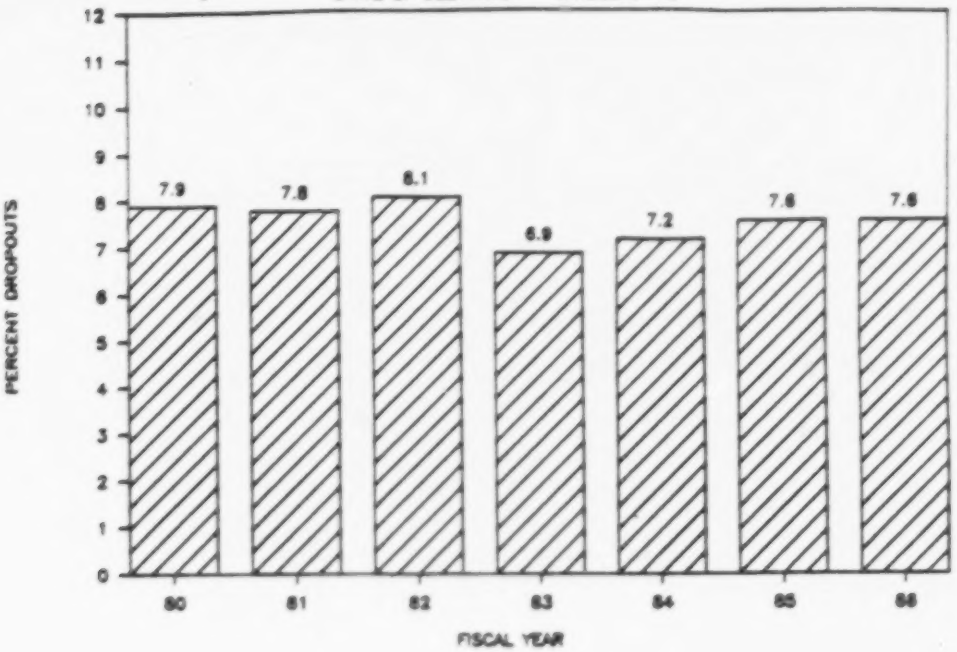
TOTAL DROPOUT RATES BY COUNTY

GRADES 9–12 1985–1986



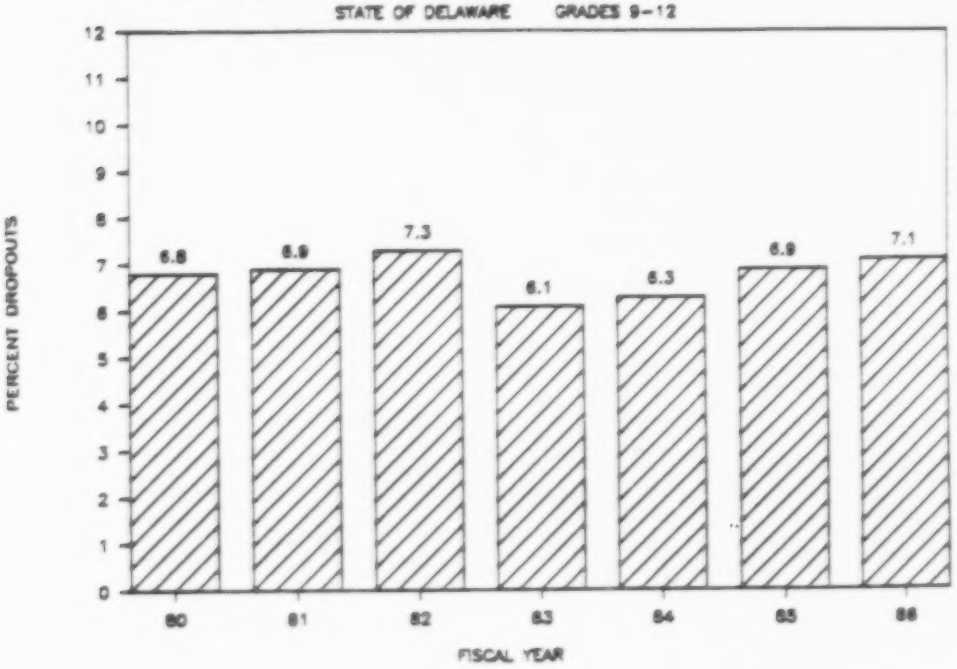
TOTAL DROPOUT RATES 1980–1986

STATE OF DELAWARE GRADES 9–12



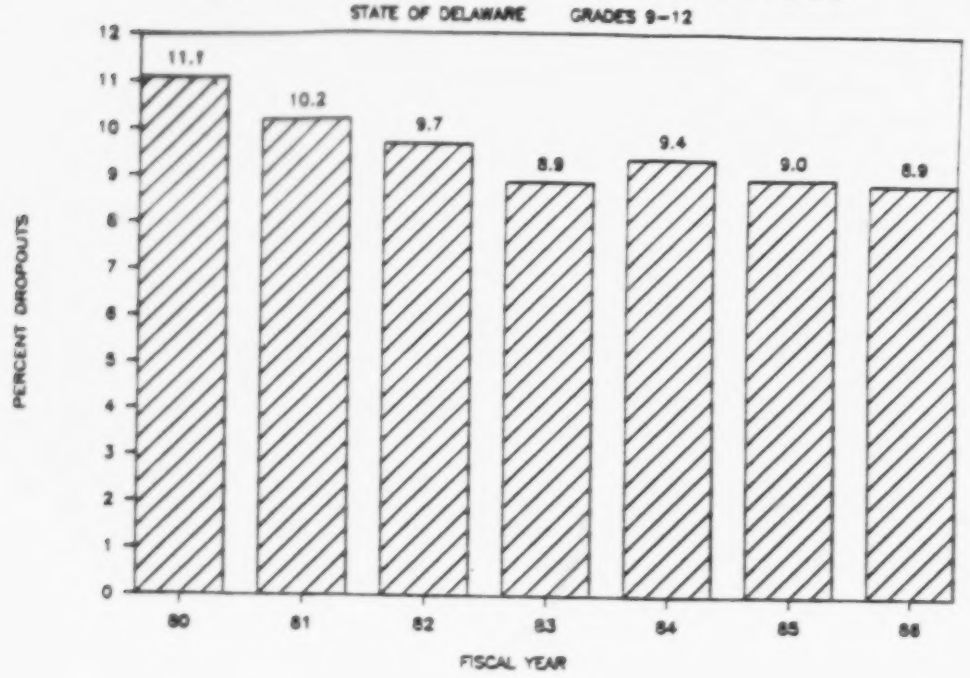
WHITE DROPOUT RATES 1980–1986

STATE OF DELAWARE GRADES 9–12



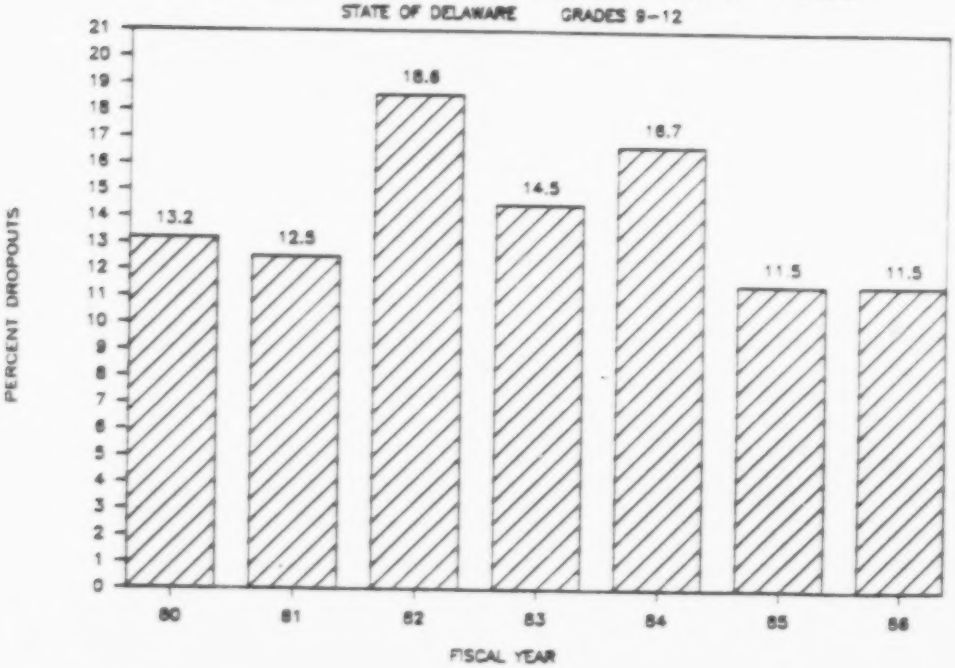
BLACK DROPOUT RATES 1980–1986

STATE OF DELAWARE GRADES 9–12



HISPANIC DROPOUT RATES 1980–1986

STATE OF DELAWARE GRADES 9–12



STATEWIDE DROPOUT RATES

- TOTAL STATEWIDE DROPOUT RATES STABILIZED IN 1985-86 AT 7.6 PERCENT AFTER INCREASING FROM 6.9 PERCENT IN 1983-84.
- STATEWIDE DROPOUT RATES FOR WHITE STUDENTS HAVE RISEN FOR THREE CONSECUTIVE YEARS FROM 6.1 PERCENT IN 1982-83 TO 7.1 PERCENT IN 1985-86.
- STATEWIDE DROPOUT RATES FOR BLACK STUDENTS HAVE DECLINED FROM 11.1 PERCENT IN 1979-80 TO 8.9 PERCENT 1985-86.
- STATEWIDE DROPOUT RATES FOR HISPANIC STUDENTS HAVE STABILIZED AT 11.5 PERCENT AFTER REACHING A HIGH OF 18.6 PERCENT IN 1981-82.

COUNTY DROPOUT RATES

* IN NEW CASTLE COUNTY, 12.6 PERCENT OF ALL HISPANIC STUDENTS ENROLLED IN GRADES 9 THRU 12 DROPPED OUT OF SCHOOL IN 1985-86.

* IN KENT COUNTY, 10.6 PERCENT OF ALL BLACK STUDENTS ENROLLED IN GRADES 9 THRU 12 DROPPED OUT OF SCHOOL IN 1985-86.

* IN SUSSEX COUNTY, ONLY 5.1 PERCENT OF ALL WHITE STUDENTS ENROLLED IN GRADES 9 THRU 12 DROPPED OUT OF SCHOOL IN 1985-86.

* THE GREATEST OVERALL INCIDENCE OF DROPPING OUT OCCURRED IN KENT COUNTY AT THE RATE OF 8.1 PERCENT.

APPENDIX B

DELAWARE'S DROPOUT PREVENTION PROGRAM

THE EDUCATION ADVANCEMENT MODEL (THE T.E.A.M. APPROACH)

A STATEMENT
SUBMITTED BY:

CLIFTON HUTTON, STATE SUPERVISOR
GUIDANCE AND PUPIL PERSONNEL SERVICES
DELAWARE DEPARTMENT OF PUBLIC INSTRUCTION
P.O. BOX 1402, TOWNSEND BUILDING
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TELEPHONE (302) 736-4885

SUMMARY

Delaware's Statewide dropout prevention program is a school based program which involves not only school staff but also members of the business and industry community, other agencies, and the community in general. A statewide advisory committee has been established to assist the Department of Public Instruction in conducting the activities of T.E.A.M. (The Education Advancement Model). The model includes a State Conference, which was held in October 1986, pilot programs in schools at three levels (elementary, middle school, and high school), and the recommendation of a model dropout prevention program for grades K-12. The program is the result of a cooperative effort in planning by the Governor's Economic Development Cabinet Council, staffed by the Office of State Planning and Coordination in cooperation with the Department of Public Instruction.

THE EDUCATION ADVANCEMENT MODEL (THE T.E.A.M. APPROACH)

A recent report from the Delaware Economic Development Cabinet Council highlighted a need which had been evident to most Delaware educators for some time. The report stresses that "in spite of many excellent efforts across the State to curb the dropout rate, there are still far too many Delaware teenagers who elect to jeopardize their own futures - as well as that of the State - by leaving school early." The council's report emphasized the need for planned programs to decrease the dropout rate with special emphasis on early identification and early intervention with children who may be "at risk".

In order to deal more effectively with the dropout problem in Delaware, the following plan of action has been implemented by the Delaware Department of Public Instruction. It is the intent of this plan to develop a three part program which will include (1) early identification and intervention, (2) mentoring "at risk" students through the system, and (3) continued nurturing and mentoring at the high school level including alternative educational approaches when appropriate. The program is being piloted in four different sites, will be evaluated, and the results will form the basis for a recommended Delaware K-12 model for dropout prevention. One site is an elementary school, two are middle schools and the fourth is a high school. Districts who applied to be part of the pilots were asked to comply with a set of program standards. A small incentive grant was offered to carry-out activities of the pilot in addition to required technical assistance.

It should be stressed that the primary purpose for this program is to use all available resources to nurture students through the educational system to include graduation. This will benefit both the student and society. Single methods are not the solution to the problem, but, rather an overall attempt to make schools pleasant, meaningful, productive and nurturing places for all students.

ADVISORY COMMITTEE

An advisory committee has been established to assist the Department of Public Instruction in this effort. The committee will be asked to participate in some activities of the program. However, the committee functions only in an advocacy position while policy decisions concerning the program are made by the State Department of Public Instruction. The committee includes educators, parents, representation from the State Office of Planning and Coordination, and business/industry representatives. Members have been selected to assure input from each county.

STATEWIDE CONFERENCE

A Statewide conference on the dropout problem was held in October 1986. The purpose of the conference was to orient the participants to the pilot projects, to provide information on the topic, and to create an opportunity

for an exchange of ideas. This conference was be held under the sponsorship of the New Castle County Interagency Council on Youth. Invitations were extended to interested groups Statewide. The conference was both informative and task oriented. Not only did the conference serve as a kickoff for the dropout prevention program, but it also generated suggestions for the involvement of agencies and other support services in this school based program.

CALL FOR LETTERS OF INTEREST

Immediately following the Statewide conference in October, school districts were asked to submit letters of interest if they wanted to be considered for one of the pilot sites. A small amount of incentive money ($2,000) was offered to each site to be used for materials, supplies and activities related to conducting the pilot program. Schools were encouraged to use existing resource persons, involve parents and community people and make use of existing resources from other agencies. Recognizing that funding is not the solution to the problem, incentive grants were provided for the purpose of training, conducting program related activities, or purchasing needed materials to assist existing school staffs to modify their approaches to encourage students to stay in school.

SELECT PILOT SITES

Four pilot sites were selected. There is one elementary, two middle, and one high school site.

• Prior to filing a letter of interest, districts were provided with a set of guidelines for each pilot. Their letters were required to include a description of proposed activities, designed to meet these guidelines.

GENERAL GUIDELINES

Guidelines which are common to all three pilots include the following:

- a local coordinator to facilitate the program,
- include counseling services in the program,
- involve parents,
- involve people from the community including business and industry,
- use a nurturing approach such as mentoring,
- provide for early identification and intervention,
- seek involvement of other agencies,
- avoid labeling or stigmatizing "at risk" students,
- plan for program evaluation, and
- procedures to give recognition to teachers and staff who participate.

SPECIFIC PROGRAM GUIDELINES BY SCHOOL LEVEL

The pilot programs will each be designed to meet the general guidelines listed above. In addition, each site must plan its program to fit the general description which follows.

The Elementary School Program - should include the identification of at-risk students. The program should be aimed at making the whole school a positive place for all students with special attention being given to those students identified as at-risk, on a priority basis. A school counselor should be involved to assist students in developing a positive self-concept. However, the counseling should not be left to the counselor alone. The process of counseling, mentoring and nurturing students on an individual basis should be the responsibility of each staff member. The counselor and/or principal should be able to facilitate and coordinate the process. Involvement of parents, when possible, and volunteers from the community should also enhance the overall process. As needed, the counselor and other staff members should be able to contact or recommend community agencies to meet special needs of students or their families which cannot be met by the school.

The Middle/Junior High School Program - should encompass the same aspects of nurturing and monitoring of the students as described in the elementary program, but developmentally several aspects should be added. Mentors should encourage students to become involved in school activities as much as possible in order to create ownership and a feeling of belonging. This might necessitate an expansion of the students' activity program. The counselor and mentors should also work with students in relating their schooling to the formation of tentative career plans. This will help to make school meaningful for students and enable them to choose a course of study when entering high school which is appropriate and meaningful. NOTE: Two pilot programs have been established at the middle school level.

The High School Program - should build upon the same concepts as the earlier approaches but the mentoring/encouraging process will be even more critical as students enter the age span when most students drop-out. In addition to the regular counselors and teachers, a critical person at this stage should be a career guidance and placement counselor. This person, or someone who can assume the role, can continue to work with students to help them relate their course work to career or employment plans, seek part-time employment if appropriate, and work toward full-time employment or further training upon graduation. Working with potential drop-outs could be a primary responsibility of the career guidance and placement counselor.

Since many students who drop-out do so because they feel that the traditional school program does not meet their needs, every attempt should be made in the high school pilots to create or take advantage of alternative educational approaches. Some students can benefit from special vocational training. Others may need to get involved with

employment in the local community for part of the day as a logical extension of their educational program. Both of these possibilities already exist and may only need to be expanded. Still other students could benefit by creating a different time frame for school attendance, such as late afternoon and evening. The purpose of the high school pilot should be to keep students involved in their educational program by making it meaningful to them, through being flexible, and demonstrating personal interest through mentoring and encouragement. Nurturing and student involvement should be key concepts.

TRAINING AND ORIENTATION

The Department of Public Instruction is providing training and technical assistance for key personnel from the pilot sites during November and December 1986. Included in this assistance will be a suggested process and instrument which may be used to identify "at risk" students. The activities of each pilot will be planned to assist these students. Assistance will also be provided during the training period in planning for the program evaluation.

IMPLEMENTATION OF PILOT PROGRAMS

The pilot programs were implemented in January 1987. The project will operate from January through June. This timeline will allow the project to begin as early as possible, but also seems logical because some behavior patterns of potential dropouts will be more recognizable in January than in September. The short term of the pilot will allow schools to analyze their experience on a limited basis. It is hoped that these experiences will lead the pilot schools to continue their efforts and will provide information needed to develop a recommended K-12 model for Delaware.

EVALUATION

Districts will be asked to provide longitudinal data to DPI or a designated independent evaluator at the end of the project for the purpose of compiling an overall evaluation report for the pilot. It will be determined in advance, by the evaluation design, just what that data will be.

REPORTING RESULTS

The evaluation report including results, implications and recommendations will be delivered to the State Board of Education. The findings will then be reported to all school districts and other interested parties.

Following the overall evaluation report, key personnel from each district will be asked to convene briefly as a working committee to revise each pilot program model as needed. The revised models will be combined to form a recommended model for dropout prevention in a developmental K-12 approach.

APPENDIX C

the **N**ational **C**learinghouse for **B**ilingual **E**ducation

The National Clearinghouse for Bilingual Education (NCBE), funded by the Department of Education, is a national information center on the education of limited English proficient students. NCBE provides reference and referral services on all aspects of bilingual and English as a second language instruction. In addition to these services, NCBE offers free access to its electronic information system. The system includes two searchable databases and an electronic bulletin board. NCBE's bimonthly newsletter, FORUM, presents news articles and other current information. NCBE's information system and publlications focus on the needs of practitioners and individuals or organizations which work directly with practitioners in the education of limited English proficient persons.

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Contact **NCBE**

Contact The National Clearinghouse for Bilingual Education (NCBE) by telephone, weekdays between 7:00 a.m. and 6:00 p.m. (EST).

Outside Maryland call: 1-800-647-0123

In Maryland call: (301) 933-9448

If you prefer to contact us by mail, our address is:

ncbe

11501 Georgia Avenue, Suite 102
Wheaton, MD 20902

ncbe

the **N**ational **C**learinghouse for **B**ilingual **E**ducation

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COMSIS Corporation Information Systems Division

Information Services

NCBE provides information to practitioners in the field on curriculum materials, program models, methodologies and research findings on the education of limited English proficient persons. We continually collect and review materials covering bilingual education, English as a second language (ESL), refugee education, vocational education, educational technology and related areas. When you contact NCBE with an information request, our information specialists will assist you by locating and sending information on requested subject areas from in-house resources, or identifying referral resources. Our staff provides reference and referral information in response to both telephone and mail requests.

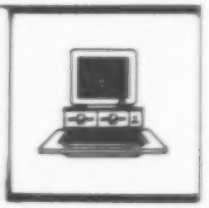
■ **Resource File.** NCBE staff collects and indexes articles, resource lists, bibliographies and other timely information and uses this resource file to answer questions quickly and accurately.

■ **Information Packets.** NCBE has compiled Information Packets on frequently requested topics. These packets include short articles, bibliographies, lists of programs and materials, publishers and resource organizations. Single copies of these packets may be obtained from NCBE at no charge.

■ **Mini-Bibliographies** contain references to current literature on the educational needs of LEP students and suggested practices to meet those needs. Single copies of these Mini-Bibs are available from NCBE at no charge. Current topics include:

—Literacy Instruction
—Mathematics and Science Instruction
—Gifted and Talented/Learning Disabilities
—Effective Schools
—Dropout Prevention

Electronic Information System



NCBE offers electronic access to its information system at no cost to users. Users are able to search a database of information containing curriculum materials and literature related to the education of limited English proficient (LEP) students. NCBE invites you to submit materials for inclusion in our database.

An electronic bulletin board is also available. This bulletin board contains news from federal, state and local education agencies, conference announcements and other current information.

Additional features of the electronic information system are the following:

■ **Reference and Referral Database** containing a listing of resource organizations. These organizations include State Education Agencies, and the Educational Resources Information Center (ERIC) network of clearinghouses.

Two newly added files in this database are:

— Directory of more than 500 publishers and distributors serving minority language education.

— Directory of software programs that can be used in the education of LEP students.

■ **Searches-on-File database** containing database searches on frequently requested topics. These searches include citations from both the NCBE and ERIC databases. Paper copies of these on-line searches can be purchased from NCBE for a nominal charge.

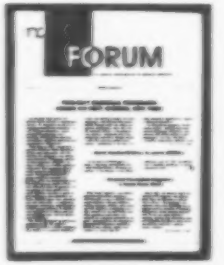
Publications

NCBE develops and publishes three types of publications: a bimonthly newsletter, occasional papers, and program information guides. All publications focus on significant issues related to the education of LEP students. These publications enable NCBE to fill the wide range of information needs of a diverse audience of teachers, administrators, teacher trainers, researchers and other professionals interested in the education of language minority persons.

Information on how to obtain these and other NCBE publications is contained in our Products List. The NCBE Products List is an annotated bibliography of our entire selection of publications and is distributed free of charge.

FORUM, NCBE's bimonthly newsletter, presents news articles and other current information in an objective, factual and informative style.

To receive FORUM at no charge, contact NCBE and ask to be placed on our mailing list.



APPENDIX D

POLICY ON THE EDUCATION
OF CHILDREN OF LIMITED ENGLISH PROFICIENCY

Limited English Proficiency Programs (Bilingual Education)

The State Board of Education believes in the following program goals for students of limited English proficiency:

1. the insurance of equal educational opportunity to every eligible student of limited English proficiency;

2. the enabling of limited English proficient students to continue to develop academically while achieving competence in the English language in order to facilitate their successful integration into regular classrooms and to allow them to meet grade promotion and graduation standards.

Eligibility for instructional programs designed for limited English proficient students should be based on the following criteria. A student who by reason of foreign birth or ancestry speaks a language other than English, and either comprehends, speaks, reads or writes little or no English, or who has been identified by a valid English language assessment instrument as a pupil of limited English proficiency, is eligible to receive a program of bilingual education or English as a Second Language. The parents or legal guardians of limited English proficient children identified for enrollment in such programs should be informed of the reasons for their child's selection, the native language used in the program, and the alternative educational programs in the local district. Parental involvement in their children's instructional program should be encouraged, including the option of deciding whether or not to enroll their children in such programs.

Instructional programs for pupils of limited English proficiency should not exceed three years, which period may be extended by the State Superintendent with respect to individual pupils, upon application therefor by the appropriate school authorities.

Where appropriate and practicable, transitional bilingual education programs may be provided to meet the needs of qualified pupils in order to facilitate their future integration into the regular school curriculum. Where feasible, the bilingual education program may be provided on a cooperative, multi-school, multi-district or regional basis.

The State Board of Education recognizes that LEP students bring to their schools and communities languages and cultural heritages that enrich the curriculum and school setting. The Board acknowledges the importance of providing all children with opportunities for gaining an understanding of their own culture as well as the cultures of others.

Bilingual programs should be designed to:

1. provide content instruction for children of limited English proficiency using the child's native language and English;

2. provide native language instruction; and

3. provide English as a Second Language (ESL) instruction.

The State Board of Education recognizes ESL-only programs as currently the best solution in answering the needs of school districts with small numbers of children from nations with uncommon languages or with small numbers of children speaking the same non-English language. ESL instruction should include the four language skills areas: listening/comprehension, speaking, reading, and writing and assist in the learning of content areas through structured monolingual instruction in English.

Instruction in content area subjects (mathematics, science, and social studies) should be equivalent in scope to the curriculum required by the Department of Public Instruction and the local school district. Pupils taught in their native language are expected to progress in the content areas taught at the same rate as their English-speaking peers are expected to progress when taught in English.

APPENDIX E

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Georgetown University

Dr. J. Michael O'Malley, Director
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